The background of the entire page is a photograph of a wooden tray filled with numerous small, oval-shaped grain samples, likely wheat or barley, arranged in a grid-like pattern. The grains are light-colored and have a textured surface.

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SASKATCHEWAN CO-OPERATIVE
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Head Office—Regina

March, 1946

1945

JUNIOR CO-OPERATIVE

Variety Tests

JUNIOR CO-OPERATIVE VARIETY TESTS

FLAX-WHEAT, BARLEY
and OATS



1945

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CONTENTS

		Flax- Wheat	Barley	Oats
	<i>Page</i>	<i>Page</i>	<i>Page</i>	<i>Page</i>
Foreword.....	3	—	—	—
Introduction.....	4	—	—	—
Location of Tests.....	5	—	—	—
Description of Tests.....	5	—	—	—
History of Project.....	6	—	—	—
Facts to be Remembered when Reading and Studying Results.....	7	—	—	—
Analysis of Data.....	9	—	—	—
General Growing Conditions.....	9	—	—	—
Precipitation Table.....	12	—	—	—
Description of Varieties.....	—	13	26	54
Cash Value Per Acre (Flax-Wheat).....	—	13	—	—
Grain Yield.....	—	14	27	—
Histogram Showing Cash Value Per Acre.....	—	14	—	—
Histograms Showing Yields.....	—	—	30	—
Height of Plants.....	—	15	27	—
Days from Sowing to Ripening.....	—	—	28	—
Straw Strength.....	8	—	29	—
Neck Strength.....	8	—	29	—
Weight Per Measured Bushel.....	—	—	29	—
Commercial Grades.....	—	—	30	—
Summarization According to Cereal Variety Zones.....	—	—	30	—
Individual Results by Wheat Pool Districts.....	—	16	41	57
Conclusions.....	59	—	—	—
Acknowledgments.....	59	—	—	—

FOREWORD

THE DATA embodied in this report represent the results of the 1945 variety testing programme conducted by the Saskatchewan Wheat Pool.

For eleven successive years these experiments have been undertaken by our Junior Co-operators and it is worthy of note that during the period nearly 3500 individual tests have been conducted and 51 different varieties have been used.

Many of our co-operators of former years are now returning to civilian life after serving in different branches of the services. We welcome them home with heartfelt thanks for the part they played during the years of terrible warfare. There are some who will not come back, but the memory of their sacrifice will remain in the hearts of Canadian people for centuries to come.

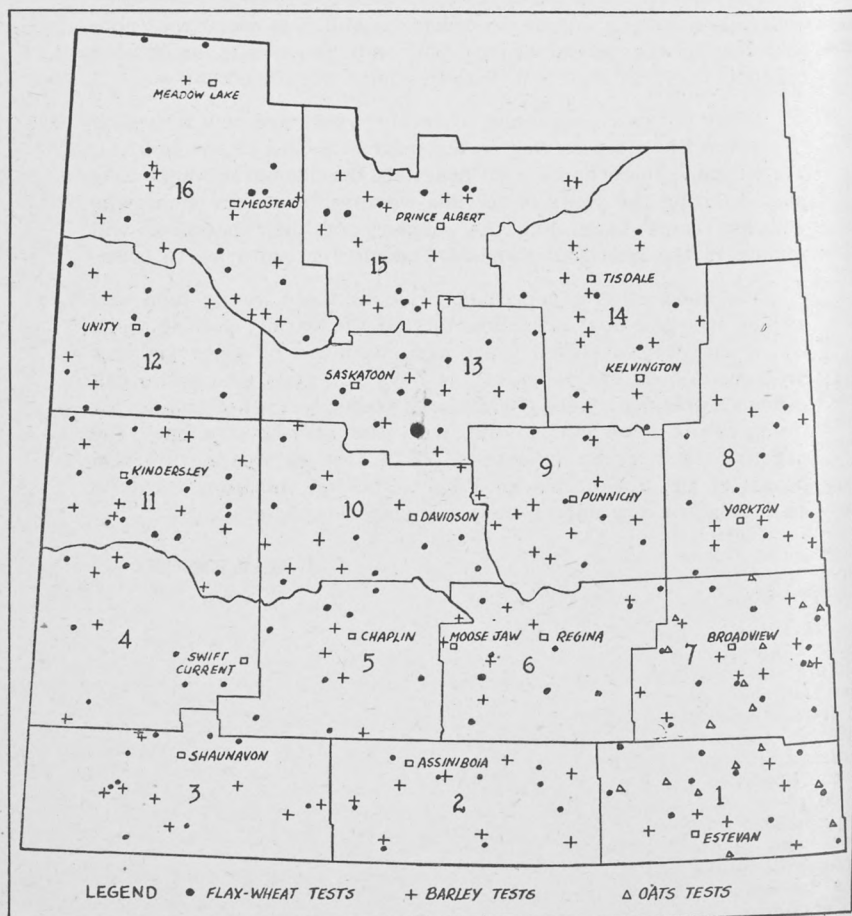
We know it is a source of pride to those young men and women who are now returning to find the variety testing work which they began eleven years ago continued by their younger brothers and sisters. Some of the boys and girls who undertook the work this year were particularly young, yet all of the Junior Co-operators have carried out with the utmost efficiency the exacting task which is entailed in a test of this nature. On behalf of the Saskatchewan Wheat Pool organization I extend to each and every one of them my sincere appreciation.

J. H. WESSON.

INTRODUCTION

FOR a number of years a point of interest to all connected with the agricultural industry has been the comparative value of wheat and flax as a cash crop. Realizing this the Saskatchewan Wheat Pool included in its 1945 variety testing project a test between Thatcher, the predominant wheat variety in Saskatchewan, and Royal and Viking flax. The results have been worked out to a point which shows the relative financial returns of each variety. In 1942 a similar test was conducted as an experiment. In the year mentioned the project was not sufficiently widespread to be of value to farmers in all parts of the Province and it is interesting to note that out of 14 individual tests, in 12 tests flax showed a decidedly greater value than wheat. This year 151 flax versus wheat tests have been conducted, and while variations in values have occurred in different areas, it is believed that much worthwhile data have been gathered.

MAP SHOWING LOCATIONS OF TESTS



The second part of the 1945 programme was an extensive barley project. Due to the trend toward an increase in acreage sown to coarse grains it is believed that this test will be of particular interest to western agriculturists. The scientist, realizing the need for better malting barley varieties, has recently turned his attention toward a successor to O.A.C. 21, the standard malting variety, and a smooth-awned variety known as Montcalm is the result of his efforts. This new variety was included in the tests sown in the areas of the Province where much of our barley is grown for malting purposes and in these areas Montcalm has been tested against O.A.C. 21 and three feed barley varieties. In the zones where barley is generally grown for feed, five feed varieties were used.

The third part of the programme consisted of a limited oats test carried out with four varieties. Oat growers in the south-eastern area of the Province have shown interest in varietal production tests. For their benefit the Saskatchewan Wheat Pool included 18 tests in Wheat Pool Districts Nos. 1 and 7. (See illustration page No. 4.)

LOCATION OF TESTS

For purposes of administration the Saskatchewan Wheat Pool has divided the Province into 16 districts. (See map showing location of tests, page No. 4.) Each district is divided into 10 or 11 sub-districts.

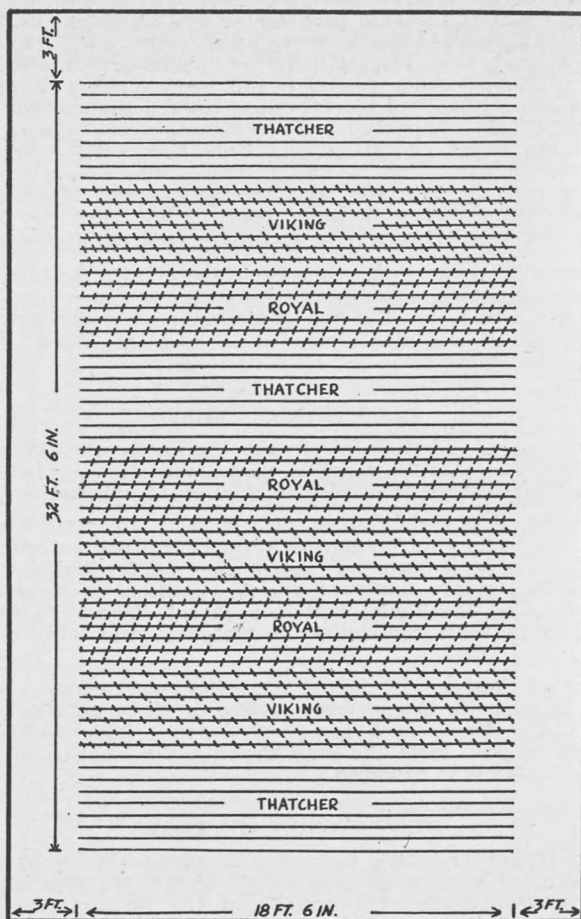
One aim of the variety test project was to give each variety a fair trial under as many different conditions of soil and moisture as possible. This entailed a very widespread distribution of tests over the whole of the Province. The policy used for the distribution of tests was to have one Flax-Wheat and one Barley test in each sub-district. In Districts 1 and 7 where Oat tests were conducted, an Oat test was also placed in each sub-district.

Due to the shortage of labor, difficulty was experienced in a few sub-districts in securing the services of two or three boys or girls to carry out the work. For this reason some sub-districts have no tests. However, as will readily be seen from the map showing the location of tests, a good working distribution was achieved.

DESCRIPTION OF TESTS

The Flax-Wheat test this year was sown as simply as possible. The whole test occupied a piece of land 38' 6" by 24' 6". This allowed a clear space of three feet around the outside of the planted rows so that the space which actually contained test rows was 32' 6" by 18' 6". In all, 66 rows were sown, each six inches apart, of which only 18 rows were harvested. The remaining 48 rows were sown in order that the test would be conducted under conditions as nearly as possible equalling those in the field. Each row was sown 18½ feet long but only the centre 16½ feet was harvested. This left one foot of grain at the end of each row to act as a protection buffer during the growing season. The plan of the Wheat-Flax test shows how it was sown in nine variety plots, each variety being represented three times. The distribution or randomization of varieties in each test was the same.

The Barley and Oat tests were sown under the same plan. Each test covered an area 61' by 18' 6", with a three-foot clear space on all sides, making the total size of the whole test 67' by 24' 6". As in the Flax-Wheat test the rows were sown 18½ feet long with only the centre 16' 6" to be harvested. Each test was comprised of 60 rows sown 12 inches apart with an extra buffer row sown at each end, the buffer row being the same variety as that sown in the end plots. This made a total of 62 rows in the whole test. In the Barley tests five varieties were used, being sown in 20 plots, each variety plot being represented four times. Four varieties were used in the Oat tests. These were sown in 20 plots, each variety plot being represented five times. In the case of oats and barley five different randomizations or distributions for seeding were used. This was to ensure that any one variety would be sown beside any other variety only a minimum number of times.



PLAN OF FLAX-WHEAT TEST

The barley and oat tests were similar except that 62 rows were sown instead of 66.

HISTORY OF THE PROJECT

Supervisors were carefully selected by the delegate of each sub-district. The boys and girls were chosen for their interest in scientific agriculture, their keenness and their dependability to carry an intricate project through to a successful conclusion.

The correct amount of seed for each row of each test was carefully weighed at the Head Office of the Saskatchewan Wheat Pool and placed in a numbered envelope which also showed the name of the variety.

Envelopes of seed and numbered stakes to mark each row to be harvested were parcelled together and forwarded to the supervisors, together with detailed instructions for seeding. Plans of the test were included, showing measurements, positions of rows and correct distribution of varieties.

During the growing season three progress reports were required to be completed by the co-operator. Each report dealt with a different period of development in the test, the ultimate aim being a complete history of the individual project from the time of seeding until the grain was harvested.

The First Progress report contained information regarding the date

of seeding, soil type, cultural treatment, soil moisture depth and amount of rainfall for the period between seeding and June 15th. Additional information pertaining to each variety was requested, including date of emergence, uniformity of stand, cutworm, wireworm, and grasshopper damage and the extent of soil drifting damage if any.

The Second Report on Barley and Oat tests contained average heading dates of each variety, amount of noticeable damage by insects, the number of loose smutted heads and percentage of rust infection.

The Third and Final Progress report on Oats and Barley included details of heights, dates of ripening and harvesting of each variety, together with percentage of damage by birds, shattering, covered smut and rust infection. Straw strength was noted, also neck strength in the case of barley. The final report for Flax-Wheat tests included information in connection with diseases which attack the flax plant.

Shortly before harvest, instructions for harvesting were forwarded to each co-operator. These explained the method of harvesting, curing and parcelling the returns from each row under test. Co-operators were requested to mark each parcel carefully with the name of the variety and the number of the row. Delivery of the parcels was required to be made to the nearest Pool Elevator Agent who was given instructions and special tags for forwarding the sheaves to Head Office of the Wheat Pool at Regina.

On arrival at Head Office the sheaves were threshed, the grain from each row weighed in grams, graded and the weight per measured bushel established. All grading was carried out by experienced grain inspectors.

As has been the case during the past eleven years, the project was planned and supervised by Dr. J. B. Harrington, Professor of Field Husbandry, University of Saskatchewan, Saskatoon. The threshing, calculating and statistical analysis in connection with the work was carried out at Head Office of the Saskatchewan Wheat Pool in Regina, under the direction and supervision of I. K. Mumford.



Weighing and grading the samples in the laboratory at Head Office of the Saskatchewan Wheat Pool.

FACTS TO BE REMEMBERED IN READING AND STUDYING RESULTS

The information compiled from the results of a test conducted for one year only cannot be used as conclusive evidence in the selection of a

variety. Weather conditions vary considerably from year to year and a variety which gives a favorable performance in any one year may not do well under conditions which exist the following year. In making a choice it is advisable to study the results of several years' tests.

In this regard, the pamphlet "Varieties of Grain Crops for Saskatchewan 1946" is recommended. This pamphlet is compiled by the Saskatchewan Cereal Variety Committee and may be obtained free of charge from the University of Saskatchewan, Saskatoon, the Provincial Department of Agriculture, Regina, or Saskatchewan Co-operative Producers Limited, Regina.

Necessary Difference.

The statistical term "necessary difference" is used in different parts of the report and an explanation of its meaning is given below.

All of the individual tests have been planned in a mathematical manner in order that (1) they would be fair with all varieties placed as nearly as possible alike; and (2) that they would be sensitive and reveal any varietal superiority which might exist. An approved statistical method has been used in analyzing the grain yield results to determine the difference required between varieties for odds of 19 to 1 that one variety under the conditions of the test and irrespective of soil variation yields more than another. In grain yield analyses of the individual tests, and in the analyses of the different cereal variety zones if the difference between two varieties equals or exceeds the necessary difference it is considered to be important, that is, the higher yielding variety is considered to be significantly higher yielding than the other. In different words, if one variety exceeds another by a difference which equals or exceeds the figure shown as the necessary difference, then the chances are 19 to 1 that notwithstanding any variation in soil which might give a variety an advantage, the higher yielding variety has outyielded the other through its superior yielding ability.

Straw Strength.

Straw strength was reported on the basis 10-0. If the plants in a plot were straight and erect the strength of straw was recorded as 10. If the straw showed signs of weakness the figure 9 was used. The more the plants leaned the smaller the figure that was used so that finally, the straw strength of plants lying flat on the ground was recorded as 0.

Neck Strength.

Neck strength was recorded on the basis of 1, 2, 3, where 1 indicated a strong neck holding the head upright, 2 indicated a neck of "medium" strength, while 3 was used when the neck appeared very weak.

Individual Results.

The individual results are shown in Tables Nos. 5, 25 and 29. These are arranged in Wheat Pool Districts and sub-districts so that each co-operator may compare his test with others in the neighborhood. For instance, the results of the Barley test conducted by Wilfred Gelin as of Fielding, located in Pool District 16, sub-district 1, are to be found in Table No. 25. The results show that Titan outyielded Warrior by 7.9 bushels. This is more than the necessary difference of 6.2 bushels, therefore Titan significantly outyielded Warrior. However, Titan outyielded Plush by only four bushels per acre. As the difference in yield is not equal to the necessary difference of 6.2 bushels, the fact that Titan outyielded Plush has no significance. For comparison, in the test conducted by Earl Curry of Maymont, Titan outyielded Warrior by 8.1 bushels. As the necessary difference for Earl's test is 3.5 bushels, Titan has once again significantly outyielded Warrior. In the case of Titan and Plush there is no significant yield difference. However, conditions like those found in the tests of Wilfred Gelin as and Earl Curry do not always occur. In some cases no particular correlation is evident between tests shown in the same vicinity. This situation may be caused by several things, varying moisture conditions, varying soil type, or a few days difference in the dates of seeding. The results of a test do give, however, an accurate comparison of the varieties sown under the conditions prevailing at that time on that particular farm.

Grading Remarks.

In determining commercial grades, bushel weight is the most important consideration. However, there are many other factors which may lower the grade regardless of bushel weight. In the individual results, the column headed "grading remarks" contains abbreviations for words which inform the reader of any adverse characteristics appearing in the sample of grain.

The following abbreviations have been used to signify various defects:

B.P.—Black Point	G.—Green	Sh.—Shrunk
S.B.P.—Some Black Point	S.G.—Slightly Green	S. Sh.—Slightly Shrunk
Bl.—Bleached	V.G.—Very Green	B. Sh.—Badly Shrunk
S. Bl.—Some Bleached	D.G.—Dark Green	St.—Stained
B. Bl.—Badly Bleached	I.—Immature	S. St.—Slightly Stained
Ch.—Chalky	S.I.—Slightly Immature	B. St.—Badly Stained
Del.—Discolored	M.—Mildewed	Stch.—Starchy
B. Del.—Badly Discolored	Pk.—Pink	S. Stch.—Some Starch
E.—Ergoty	Pl.—Peeled	V. Stch.—Very Starchy
S.E.—Slightly Ergoty	S. Pl.—Slightly Peeled	W.—Weathered
F.—Frosted	B. Pl.—Badly Peeled	W.S.—Weather Stained

ANALYSIS OF DATA

In order that a study could be made of the yielding capacity and general characteristics of each variety when grown under the different soil and climatic conditions of Saskatchewan, all data were compiled and analyzed by Cereal Variety Zones. The different Cereal Variety Zones are illustrated on page No. 31 and are described below:

Cereal Variety Zones—Prevailing Soil Type and Climatic Conditions

Zone

- 1A Brown soils; subject to frequent droughts.
- 1B Brown soils; subject to more frequent droughts than 1A.
- 2A Dark brown soils; subject to occasional droughts; better moisture conditions than 1A.
- 2B Dark brown soils; slightly cooler than 2A.
- 2C Dark brown soils; bench land; cooler; shorter frost-free season and better moisture conditions than 1A.
- 2D Dark brown soils; higher elevation and distinctly shorter frost-free season than 2B.
- 2E Dark brown heavy clay soils; more drought resistance than 2A and 2B.
- 2F Brown and dark brown heavy clay soils; more drought resistance than 1A and adjoining 2B.
- 3A Black soils; better moisture conditions than 2A.
- 3B Deep black and degraded black soils; shorter frost-free season and better moisture conditions than 3A.
- 3C Black soils; better moisture conditions than 2B and cooler than 3A.
- 3D Deep black soils; better moisture conditions than 3E.
- 3E Black soils; shorter frost-free season and better moisture conditions than 2D.
- 3F Degraded black soils; better moisture conditions and shorter frost-free season than 3D.
- 3H Degraded black soils; distinctly short frost-free season.
- 4A Grey and strongly degraded black soils; short frost-free season.
- 4B Grey soils; distinctly short frost-free season; better moisture conditions than 3E.

GENERAL GROWING CONDITIONS

May.—Seeding of Saskatchewan's 1945 crop was delayed by inclement weather. Heavy snowfalls occurred in May, particularly in the east-centre and north-east. High winds caused some soil drifting and depleted surface moisture. Cool weather and nightly frosts were recorded, and although at the end of the month some rain was received, there were a number of areas where further moisture was needed to germinate the late sown fields.

June.—Cool cloudy weather continued throughout June and at the beginning of the month the mercury fell below the freezing point. A heavy snowfall occurred in the extreme north-east and north-centre, but while some moisture was received, in other areas it was far from uniform, and in parts of the west-centre, centre, and south-centre, there were many points which were urgently in need of a good soaking rain. In the middle of the month light frosts occurred and higher temperatures were needed to promote growth. At this time, while in some regions moisture was reasonably plentiful, there were wide areas where, because of inadequate moisture supplies, some deterioration was apparent and a good rain was urgently needed. During the latter part of the month warmer weather prevailed and for the first time during the season the areas where severe drought damage had occurred were taking definite shape. The most seriously affected regions took the form of a triangle, the hypotenuse of which reached from a point in the western part of the extreme south-east, through the centre, into the north-west, the base of the triangle being the International Boundary, the perpendicular the Alberta border. At the end of June beneficial rains were received throughout the Province which considerably relieved the situation, but in the areas described, much irreparable damage had occurred and as reserves were still very limited, frequent rains were needed throughout the balance of the season to maintain the crops in the condition in which they appeared at this time.

July.—For the first half of July the days were warm but generally the nights were cool and light frosts were unofficially reported in the eastern and northern regions of the Province. Good showers were reported, especially in the east, but over the whole of the Province the rain was very uneven and scattered and serious deterioration was reported in the drought area of the Province. Scattered hail storms had occurred and the lateness of the crop and the heavy weed growth were causing considerable apprehension. Towards the middle of the month higher temperatures were recorded. As previously, most of the moisture was received in the northern and eastern regions of the Province. While rain fell in other regions, the precipitation was far from uniform and in the drought area of 1945 moisture was urgently needed, many points reporting that little more than the return of seed and feed could be expected. Severe hail storms occurred at this time. Grasshoppers were making their appearance and there was distinct evidence that sawfly infestation was heavy. High temperatures prevailed at the end of the month, the mercury reading over 90 degrees for three days. In the areas where moisture was sufficient, the development of the crop was rapid and conditions were maintained or improved, but in the dry areas of the Province the plants were heading out at little height and the heads were short. Hail storms were again reported with severe local damage.

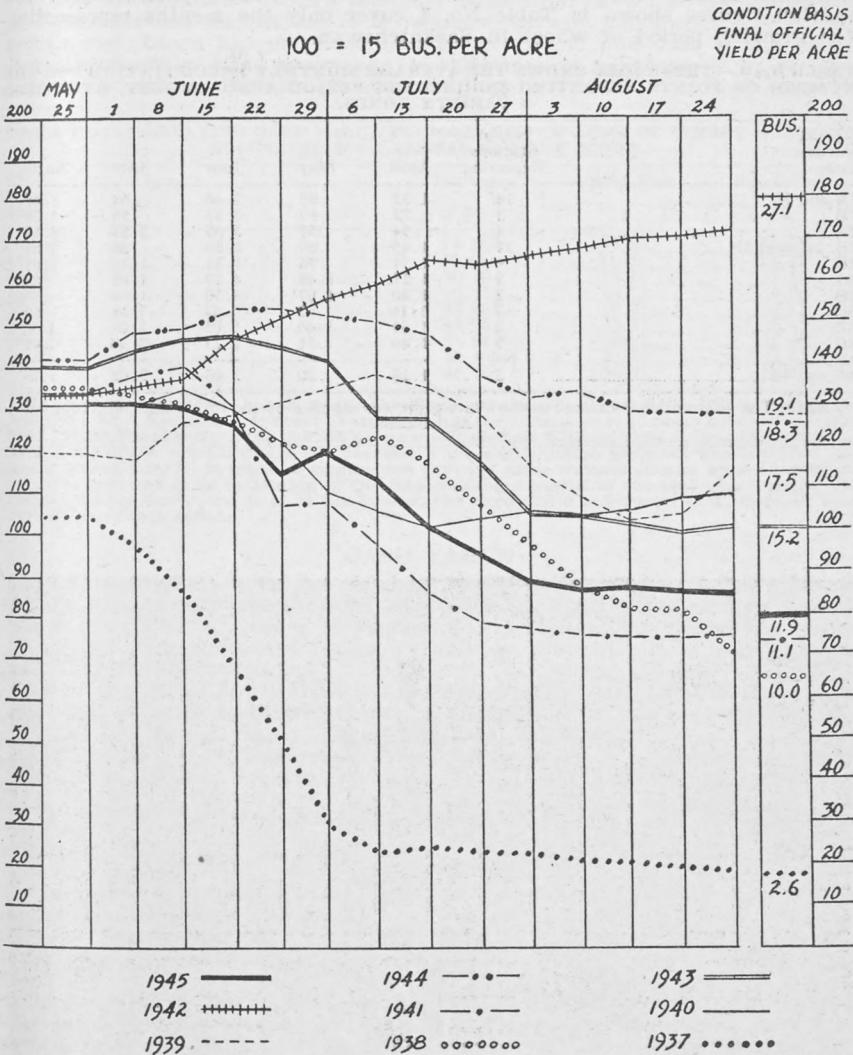
August.—The month of August started with moderate temperatures. Good rains were received over the whole of the Province and while in the drought area the moisture was too late to be of material benefit, it halted further deterioration and helped to promote better filling. Where there was little prospect of a commercial crop the moisture considerably improved the feed situation. In the eastern areas leaf rust infection was reported and in parts of the south and centre as the early wheat began to ripen it became evident that sawfly losses would be heavy. In parts of the south-centre and west-centre some of the oat fields were being cut green to save them from grasshoppers. By the middle of the month harvesting was general in the drought area and every means was employed to garner what little remained. At this time there were three days of blistering temperatures, although at other times the nights were cool and temperatures came perilously near the freezing point. The warmer weather hastened the development of the crop and it was now hoped in many areas that it could be harvested without damage by an early frost. In the heavy grasshopper infested areas much of the oats and barley were cut in an effort to save them for feed. In the south and centre cutting of the oats and barley was general. Towards the end of the month the weather was cool and freezing or below freezing temperatures were officially recorded at Consul and Canuck, and throughout eastern and northern regions there were many reports that temperatures had dropped to five or six degrees below

freezing and gardens were damaged. Some fear was felt for the flax crop. In southern, central, and western regions sawfly infestation was severe and high winds, particularly in the south-west, caused many weakened stems to fall directly to the ground. Weeds in the north-west presented a major problem in harvesting and were expected to make combining exceedingly difficult. In the south, centre, and west-centre grasshoppers were attacking whatever was left standing and it was feared these pests would also take a heavy toll before the crops could be gathered.

September.—Cool, cloudy, and wet weather considerably delayed harvesting operations during the month of September. In the south-east

Graph Showing Weekly Trend of Saskatchewan Wheat Crop 1937-1945

SASKATCHEWAN WHEAT POOL



This graph shows the condition of the Saskatchewan wheat crop as it appeared each week during the growing season. The official yield per acre is shown in the last column.

and south-centre, and over parts of the centre the precipitation consisted of heavy rains, but in the south-west, the west-centre, and across much of the north, rain and considerable snow had fallen. In all areas the precipitation was followed by heavy frost. In the west-centre and north-west, and also in parts of the north-centre, many fields were flattened completely to the ground and some of this grain was not recoverable. At the end of the month conditions became more favorable and while losses had occurred in both yields and grades, the resumption of harvesting was possible. Operations continued until, with the exception of a few areas in the west and north, the whole of the 1945 crop had been gathered.

RAINFALL

As the amount of rainfall during the growing season has a far greater influence upon the yields than the amount of annual precipitation, the rainfall figures shown in Table No. 1 cover only the months representing the growing period of wheat in Saskatchewan.

TABLE No. 1.—THIS TABLE SHOWS THE AVERAGE MONTHLY PRECIPITATION FOR THE NUMBER OF POINTS REPORTING DURING THE PERIOD APRIL-AUGUST, BY CEREAL VARIETY ZONES.

Cereal Variety Zone	No. of Stations Reporting	April	May	June	July	August
1A and 2C.....	14	1.32	.95	2.46	.64	1.45
1B.....	3	.72	.89	2.33	.55	1.38
2A.....	4	.54	.57	3.85	2.65	1.62
2B, 2E, and 2F.....	11	1.45	.89	2.69	.86	1.86
2D.....	4	1.34	.76	1.31	1.26	2.01
3A.....	3	1.11	1.46	4.37	1.08	.88
3B.....	2	1.40	1.67	4.58	1.68	.80
3C.....	7	1.16	1.92	3.51	1.28	.69
3D.....	2	1.81	1.45	5.05	2.01	1.38
3E.....	3	1.46	.51	1.23	2.30	2.07
3F.....	Nil					
4A and 4B.....	3	1.18	.70	2.03	2.02	1.76

Note: The information contained in the above table was supplied by the Provincial Department of Agriculture.



John Dancy of Mawer inspecting his Flax-Wheat Test.

FLAX-WHEAT TESTS

DESCRIPTION OF VARIETIES

THATCHER is now the most commonly used wheat variety in Saskatchewan. It was produced at the Minnesota Agricultural Experimental Station, St. Paul, by selection from the double cross (Kanred × Marquis) × (Marquis × Iumillo). Iumillo is a highly rust resistant durum variety and Kanred has some resistance to rust. Thatcher is resistant to stem rust and loose smut but susceptible to leaf rust and covered smut.

VIKING is a white blossomed variety with short straw and large yellow seeds. It was originated at the North Dakota Experimental Station from the cross C.I. 40 × Bolley Golden. Viking is resistant to both rust and wilt. It is late maturing and has high oil quality.

ROYAL originated from a selection made from Crown at the University of Saskatchewan, Saskatoon. It is resistant to wilt and moderately resistant to rust. Royal has mid-sized blue blossoms and mid-sized brown seeds. Royal produces a high percentage of oil which is satisfactory in quality. This variety shows definite resistance to spring frost.

TABLE No. 2.—RELATIVE CASH VALUE IN DOLLARS PER ACRE OF WHEAT AND FLAX SUMMARIZED BY CEREAL VARIETY ZONES.

Cereal Variety Zone	Thatcher	Viking Flax	Royal Flax
	\$	\$	\$
1A and 1B.....	24.61	15.64	17.87
2A and 2E.....	36.45	21.01	29.31
2B, 2D and 2F.....	30.16	18.62	23.59
3A.....	46.42	28.72	35.86
3B.....	43.90	40.25	44.71
3C.....	43.96	30.27	32.44
3E (West).....	31.64	18.46	24.55
3E (East) and 3F.....	49.40	32.27	33.75
4A and 4B.....	56.78	30.21	31.23

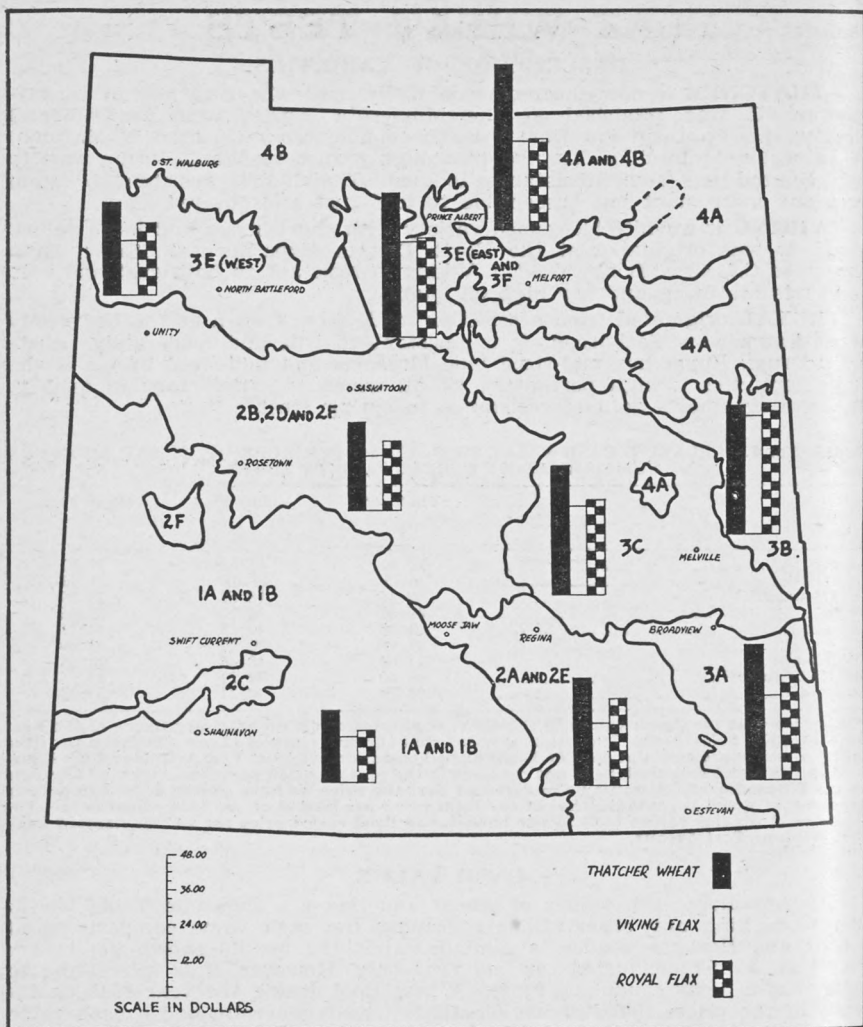
*The price used for wheat values in the above computations is an arbitrary figure of \$1.38 per bushel for No. 1 Northern. It must be stressed that the difference of 13 cents between the fixed initial wheat Board carlot price of \$1.25 per bushel basis Fort William/Port Arthur and the figure used in the above calculations is not necessarily the participation payment which will be paid by the Wheat Board. It must be understood that the price we have chosen is for comparison purposes only and is no indication of the final value per bushel of the 1945 wheat crop. The figure used for flax values is \$2.75 per bushel, the fixed carlot price for 1 C.W. flaxseed basis Fort William/Port Arthur.

CASH VALUE

Comparative cash values of wheat and flax are shown in Table No. 2. Before making any observations regarding the cash value comparisons of wheat and flax the reader is reminded that the results shown herein are based on a test conducted for one year only. However, it is interesting to note that in tests conducted by the Wheat Pool during the year 1945 on the basis of the prices listed above, Thatcher wheat generally had a cash value somewhat superior to that of Royal or Viking flax. In one zone only did the value of flax exceed that of Thatcher wheat. In Zone 3B Royal flax showed a cash value of \$44.71 per acre compared to \$43.90 for Thatcher. In every zone Royal flax proved more valuable than Viking, the differences ranging from \$1.02 to \$8.30 per acre. It should be noted that although for purposes of comparison, values have been based on Spot prices Fort William-Port

TABLE No. 3.—AVERAGE YIELD IN BUSHELS PER ACRE SUMMARIZED BY CEREAL VARIETY ZONES.

Cereal Variety Zone	No. of Satisfactory Tests	Thatcher	Viking Flax	Royal Flax
1A and 1B.....	10	18.6	5.7	6.6
2A and 2E.....	5	26.7	7.6	10.7
2B, 2D and 2F.....	12	21.6	6.5	8.4
3A.....	7	33.7	10.4	13.0
3B.....	4	33.5	14.7	16.4
3C.....	9	32.3	11.0	11.8
3E (West).....	4	23.0	6.7	9.0
3E (East) and 3F.....	7	36.2	11.8	12.3
4A and 4B.....	8	42.5	11.0	11.5



Histograms showing Cash Value in Dollars per acre of Wheat and Flax.

Arthur, if Street prices were used there would be some variations and in most instances the advantage now shown by wheat would not be so great.

GRAIN YIELD

The average yields in bushels per acre are shown in Table No. 3. Although the difference in yields of Royal and Viking flax do not equal the necessary difference in any zone, it is interesting to note that Royal out-yielded Viking in every zone. Generally, it is considered that Viking flax will yield almost as highly as Royal under good soil and moisture conditions. However, on the basis of these results, it would appear that where moisture is scarce Royal shows superiority. The most obvious example of this fact in the report is to be seen by comparing yields in Cereal Variety Zone 3E (West) with those produced by Cereal Variety Zone 3E (East) and 3F. The soil in these areas is very similar but during 1945, Zone 3E (West) suffered from drought while 3E (East) and 3F had excellent moisture conditions. In Zone 3E (West) under poor moisture conditions Royal exceeded Viking

by 2.3 bushels while in Zone 3E (East) and 3F where moisture was plentiful Royal exceeded Viking by only .5 bushel.

When discussing the field yielding ability of a flax variety, plant height is an important consideration. In variety tests, harvesting is done by hand and even though straw is short none of the bolls are lost. However, in a field crop of flax where the straw may be very short, the yield is cut down considerably because many bolls are missed by the harvester. In extreme cases the crop may be so short that harvesting is impossible. In this respect, the superior height of Royal gives it a definite advantage over the Viking variety.

TABLE No. 4.—AVERAGE PLANT HEIGHT IN INCHES, SUMMARIZED BY CEREAL VARIETY ZONES.

Cereal Variety Zone	Thatcher	Viking Flax	Royal Flax
1A and 1B.....	19.7	11.5	13.1
2A and 2E.....	27.3	12.7	16.0
2B, 2D and 2F.....	19.8	11.7	13.3
3A.....	29.6	19.3	21.8
3B.....	34.6	17.6	19.2
3C.....	34.4	18.6	20.8
3E (West).....	23.3	11.0	14.0
3E (East) and 3F.....	30.0	16.2	18.2
4A and 4B.....	32.3	16.1	18.5

PLANT HEIGHT

The average heights of Thatcher, Viking and Royal are shown in Table No. 4. Only a glance at the table is necessary to show the superiority in height of Royal flax over the Viking variety. Royal excelled in every zone with differences ranging from 1.6 to 3.3 inches. As stated previously in the yield summaries, height is an important consideration in the choice of a variety of flax. It is also an important consideration when choosing between flax and wheat as a cash crop. Wheat, even in light crop years is seldom so short that it cannot be harvested fairly satisfactorily with modern harvesting machinery. However, flax, with its short straw characteristics, remains a difficult crop to harvest except under reasonably good conditions.

INDIVIDUAL RESULTS

The individual results of all successful flax-wheat tests are shown in Table No. 5. The reader is advised to make a study of the "Facts to be Remembered in Reading and Studying Results" in order to fully understand the terms and abbreviated grading remarks which are used. Under this heading will also be found a full explanation of the term "Necessary Difference."



The Flax-Wheat Test supervised by Jack Smith, Calderbank.

TABLE No. 5

Individual Summarized Results of all Tests—Flax—Wheat

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed-ing to ripening	Lbs. per measured bushel	Com-mercial grades	Grading remarks
DONALD COLQUHOUN, GAINSBOROUGH											
3A.....	1	1	A	Thatcher.....	20.7	\$27.53	31	90	57	3 Nor.	
				Viking.....	2.2	6.05	26	121	53	1 C.W.	
				Royal.....	3.5	9.62	26	121	52	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

JAMES SHIEL, STORTHOAKS											
3A.....	1	2	A	Thatcher.....	37.3	\$51.47	—	—	62	1 Nor.	
				Viking.....	15.3	42.07	—	—	53	1 C.W.	
				Royal.....	17.7	48.67	—	—	53	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

ALLAN M. DUNNIGAN, ALAMEDA											
3A.....	1	3	A	Thatcher.....	35.2	\$48.58	26	103	62	1 Nor.	
				Viking.....	18.2	50.05	22	104	51	1 C.W.	
				Royal.....	17.5	48.12	24	104	51	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

VICTOR C. SELLSTED, BENSON											
2A.....	1	5	A	Thatcher.....	29.3	\$40.43	36	99	62	1 Nor.	
				Viking.....	17.2	47.30	20	114	52	1 C.W.	
				Royal.....	17.9	49.22	25	99	53	1 C.W.	
Samples bulked.											

ELLWOOD E. BARBOUR, MACOUN											
2A.....	1	6	A	Thatcher.....	28.6	\$39.47	—	—	62	1 Nor.	
				Viking.....	9.6	26.40	—	—	55	1 C.W.	
				Royal.....	6.4	17.60	—	—	55	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

KENNETH G. ANDERSON, ARCOLA											
3A.....	1	9	A	Thatcher.....	29.9	\$41.26	30	101	61	1 Nor.	
				Viking.....	7.0	19.25	18	101	54	1 C.W.	
				Royal.....	7.1	19.52	22	101	55	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

ALBERT LEVESQUE, FORGET											
2A.....	1	9	D	Thatcher.....	17.4	\$23.49	—	—	59	2 Nor.	Bl.
				Viking.....	7.8	21.45	—	—	52	1 C.W.	
				Royal.....	8.5	23.37	—	—	53	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

EMIL O. DANGSTORP, WAUCHOPE											
3A.....	1	10	A	Thatcher.....	—	—	24	—	57	3 Nor.	
				Viking.....	—	—	14	121	53	1 C.W.	
				Royal.....	—	—	18	121	55	1 C.W.	
Yields discarded.											

Tests discarded on account of damage by drought, pests, hail or other causes.

2A.....	1	7	A	Gordon H. Strong, Colgate.							
2A.....	1	8	A	Edgar H. May, Weyburn.							

WHEAT POOL DISTRICT 2

DARRYL RASMUSSEN, RADVILLE											
2A.....	2	1	A	Thatcher.....	22.8	\$31.46	15	108	62	1 Nor.	
				Viking.....	4.3	11.82	6	108	54	1 C.W.	
				Royal.....	5.8	15.95	7	107	55	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											

JOHN A. RAYNER, KILLDEER											
1A.....	2	5	A	Thatcher.....	—	—	—	93	—	—	
				Viking.....	—	—	—	94	—	—	
				Royal.....	—	—	—	95	—	—	
Samples incomplete.											

VALERE C. RAES, FIR MOUNTAIN											
1A.....	2	6	A	Thatcher.....	7.3	\$ 9.34	—	—	56	4 Nor.	
				Viking.....	—	—	—	—	—	—	
				Royal.....	—	—	—	—	—	—	
No flax samples received.											

Wheat Pool District 2—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height* in inches	Days seed-ing to ripening	Lbs. per measured bushel	Com-mercial grades	Grading remarks
OLIVER C. McKERRICHER, HORIZON											
1A.....	2	9	A	Thatcher.....	—	—	20	—	57	3 Nor.	
				Viking.....	2.3	6.32	14	—	53	1 C.W.	
				Royal.....	2.0	5.50	16	—	54	1 C.W.	
Wheat damaged by gophers. Yields discarded.											
CHARLES A. LOUCKS, PANGMAN											
1A.....	2	10	A	Thatcher.....	24.3	\$33.53	—	89	63	1 Nor.	
				Viking.....	10.9	29.97	—	106	54	1 C.W.	
				Royal.....	11.2	30.80	—	106	55	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
Tests discarded on account of damage by drought, pests, hail or other causes.											
2A.....	2	2	A	Helen A. Culver, Hardy.							
1A.....	2	3	B	Roy E. Gerde, Big Beaver.							
1A.....	2	7	A	Murray W. B. Knox, Limerick.							
1A.....	2	8	A	Ruth C. Claussen, Readlyn.							

WHEAT POOL DISTRICT 3

GERALD B. ARENDT, RAVENSCRAG											
1A.....	3	6	A	Thatcher.....	28.1	\$38.78	—	—	62	1 Nor.	
				Viking.....	6.9	18.97	—	—	54	1 C.W.	
				Royal.....	8.6	23.65	—	—	54	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
ARTHUR D. GRABATIN, BENCH											
1A.....	3	6	B	Thatcher.....	7.9	\$10.11	19	105	56	4 Nor.	
				Viking.....	—	—	6	119	—	—	
				Royal.....	—	—	8	124	—	—	
Flax yields discarded. Insufficient to thresh.											
ALAN TOMLINSON, CRICHTON											
1A.....	3	9	A	Thatcher.....	14.5	\$18.56	15	98	53	4 Spec.	
				Viking.....	3.6	9.90	8	99	*	(E) 1 C.W.	
				Royal.....	4.2	11.55	8	98	52	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
Tests discarded on account of damage by drought, pests, hail or other causes.											
1A.....	3	1	A	Neil A. Gillespie, Mankota.							
1A.....	3	3	A	Roy H. Bitschy, Climax.							
1A.....	3	4	A	Johnny L. Samoleski, Staynor Hall.							
1A.....	3	5	A	Lowell I. Anderson, Robsart.							
2C.....	3	7	A	Harold O'Brien, Jr., Stone.							
1A.....	3	8	A	J. Douglas McCaig, Scotsguard.							

WHEAT POOL DISTRICT 4

MADELEINE M. TUSTIAN, MAPLE CREEK											
1B.....	4	2	A	Thatcher.....	29.2	\$40.29	24	102	62	1 Nor.	
				Viking.....	11.0	30.25	19	103	51	1 C.W.	
				Royal.....	14.1	38.77	20	103	51	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
WILLIAM F. MILLER, ESTUARY											
1B.....	4	8	A	Thatcher.....	—	—	30	96	—	—	
				Viking.....	7.1	\$19.52	18	104	52	1 C.W.	
				Royal.....	11.9	32.24	20	104	52	2 C.W.	G.I.
No wheat samples received. Destroyed by birds.											
WENDELL A. KOST, LEMS福德											
1A.....	4	9	A	Thatcher.....	25.1	\$31.37	22	101	55	No. 5	F.
				Viking.....	8.3	21.41	11	106	44	4 C.W.	
				Royal.....	9.8	25.28	14	104	43	4 C.W.	
No significant grain yield difference between varieties. (Flax only)											
Tests discarded on account of damage by drought, pests, hail or other causes.											
1A.....	4	3	A	Leslie J. Zabel, Duncairn.							
1A.....	4	4	A	Howard L. Mortenson, Gull Lake.							
1A.....	4	7	A	Harold P. Janecke, Richmond.							
1A.....	4	10	A	Allan Currie, Verlo.							

*Insufficient to calculate bushel weight. (E) Estimated grade

WHEAT POOL DISTRICT 5

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed-ing to ripening	Lbs. per meas-ured bushel	Com-mercial grades	Grading remarks
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LEONA B. VEER, WALDECK

1A.....	5	4	A	Thatcher.....	11.1	\$14.21	24	108	54	4 Spec.	
				Viking.....	3.8	10.45	16	111	55	1 C.W.	
				Royal.....	3.1	8.52	16	111	54	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

RUDOLPH SCHOENROTH, HODGEVILLE

1A.....	5	5	A	Thatcher.....	—	—	18	86	—	—	
				Viking.....	—	—	9	98	—	—	
				Royal.....	—	—	9	98	—	—	

No samples received.

PATRICK F. WILLIAMS, HALVORGATE

1A.....	5	9	A	Thatcher.....	11.8	\$15.10	12	96	56	4 Nor.	
				Viking.....	8.5	23.37	8	97	54	1 C.W.	
				Royal.....	8.2	22.55	8	97	56	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

JOHN R. SMITH, CALDERBANK

1A.....	5	10	A	Thatcher.....	29.4	\$37.63	24	103	56	4 Nor.	
				Viking.....	.9	2.47	8	116	*	(E) 1 C.W.	
				Royal.....	1.8	4.95	9	116	*	(E) 1 C.W.	

No significant grain yield difference between varieties. (Flax only)

Tests discarded on account of damage by drought, pests, hail or other causes.

1A.....	5	2	A	Paul M. Mang, Arbuthnot.							
2C.....	5	3	A	H. Garth English, Neville.							
1A.....	5	6	A	David G. Morgan, Old Wives.							
1A.....	5	8	A	John W. Dancy, Mawer.							

WHEAT POOL DISTRICT 6

THELMA L. TERRY, WILCOX

2E.....	6	3	A	Thatcher.....	28.5	\$37.62	31	95	60	Tf. 2 Nor.	1
				Viking.....	10.3	28.32	12	94	54	1 C.W.	
				Royal.....	19.9	54.72	16	96	54	1 C.W.	

Necessary difference (Flax only)—4.3 bushels.

JOHN W. FILAZEK, Jr., SPRING VALLEY

1A.....	6	4	A	Thatcher.....	—	—	—	—	—	—	
				Viking.....	3.4	\$ 9.35	13	99	55	1 C.W.	
				Royal.....	4.6	12.65	17	99	54	1 C.W.	

No wheat samples received. Destroyed by hail.

JAMES S. HOCKLEY, INDIAN HEAD

3C.....	6	8	A	Thatcher.....	9.5	\$12.82	—	—	61	2 Nor.	Bl.Ch.
				Viking.....	2.5	6.87	—	—	54	1 C.W.	
				Royal.....	4.5	12.37	—	—	54	1 C.W.	

Necessary difference (Flax only)—.9 bushels.

IAN W. HARTLE, GILLESPIE

3C.....	6	9	A	Thatcher.....	35.3	\$48.71	36	105	63	1 Nor.	
				Viking.....	—	—	15	112	*	(E) 1 C.W.	
				Royal.....	—	—	24	112	*	(E) 1 C.W.	

Flax yields discarded. Badly shattered.

LOU JOORISITY, BETHUNE

2B.....	6	10	A	Thatcher.....	20.2	\$27.88	31	100	60	1 Nor.	
				Viking.....	8.6	23.65	16	98	54	1 C.W.	
				Royal.....	9.5	26.12	20	98	56	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

Tests discarded on account of damage by drought, pests, hail or other causes.

2A.....	6	2	A	Gerald Glaze, Sedley.							
1A.....	6	5	A	Gordon E. Tysdal, Briercrest.							
2E.....	6	6	A	Barry L. Strayer, Drinkwater.							
2E.....	6	7	A	W. Kenneth Bennett, Richardson.							

*Insufficient to calculate bushels weight.

(E) Estimated grade.

WHEAT POOL DISTRICT 7

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed-ing to ripening	Lbs. per measured bushel	Com-mercial grades	Grading remarks
EDMUND SKULMOSKI, FAIRLIGHT											
3A.....	7	1	A	Thatcher.....	31.0	\$42.78	—	—	62	1 Nor.	
				Viking.....	5.9	16.22	—	—	54	1 C.W.	
				Royal.....	13.4	36.85	—	—	55	1 C.W.	
Necessary difference (Flax only)					—1.3 bushels.						
GRANT R. BATEMAN, RED JACKET											
3A.....	7	2	A	Thatcher.....	20.7	\$28.57	—	—	61	1 Nor.	
				Viking.....	—	—	—	—	*	(E) 1 C.W.	
				Royal.....	9.2	25.30	—	—	55	1 C.W.	
Viking yields discarded.											
CHARLIE McK. DUTHIE, CREELMAN											
2A.....	7	5	A	Thatcher.....	36.4	\$50.23	—	—	63	1 Nor.	
				Viking.....	6.2	17.05	—	—	54	1 C.W.	
				Royal.....	12.7	34.92	—	—	54	1 C.W.	
Necessary difference (Flax only)					—1.9 bushels.						
WALTER W. RIEDER, PEBBLES											
3A.....	7	6	A	Thatcher.....	48.0	\$66.24	36	111	61	1 Nor.	
				Viking.....	10.9	29.97	19	119	54	1 C.W.	
				Royal.....	17.1	47.02	21	119	53	1 C.W.	
Necessary difference (Flax only)					—2.4 bushels.						
C. HENRY HOOD, WOLSELEY											
3A.....	7	7	A	Thatcher.....	34.1	\$47.06	31	92	62	1 Nor.	
				Viking.....	13.6	37.40	17	94	55	1 C.W.	
				Royal.....	15.0	41.25	20	94	52	1 C.W.	
No significant grain yield difference between varieties.					(Flax only)						
JOHN G. DOUGLAS, ROCANVILLE											
3B.....	7	8	A	Thatcher.....	20.4	\$28.15	29	131	64	1 Nor.	
				Viking.....	—	—	16	134	*	(E) 1 C.W.	
				Royal.....	—	—	18	133	*	(E) 2 C.W.	G.I.
Flax yields discarded. Bird damage.											
LANCELOT FORSBERG, STOCKHOLM											
3C.....	7	10	A	Thatcher.....	28.5	\$38.47	—	—	59	2 Nor.	
				Viking.....	17.9	49.22	—	—	55	1 C.W.	
				Royal.....	17.5	48.12	—	—	54	1 C.W.	S.G.
No significant grain yield difference between varieties.					(Flax only)						
HARRY M. HOEDEL, KILLALEY											
3C.....	7	11	A	Thatcher.....	40.1	\$55.34	38	92	64	1 Nor.	
				Viking.....	12.8	35.20	25	109	56	1 C.W.	
				Royal.....	17.4	47.85	29	94	56	1 C.W.	
No significant grain yield difference between varieties.					(Flax only)						
Tests discarded on account of damage by drought, pests, hail or other causes.											
3A.....	7	3	A	Stanley E. Wiley, Langbank.							
3A.....	7	4	A	Glenn A. Sproat, Kipling.							
4A.....	7	9	D	Irene Soyki, Spy Hill.							

WHEAT POOL DISTRICT 8

ARTHUR M. HABERSTOCK, CALDER											
3B.....	8	1	D	Thatcher.....	22.2	\$29.97	43	—	63	2 Nor.	Pk. I.
				Viking.....	14.9	40.97	15	—	54	1 C.W.	
				Royal.....	10.8	29.70	19	—	53	1 C.W.	S.G.
No significant grain yield difference between varieties.					(Flax only)						
JAMES J. ROONEY, SALTCOATS											
3B.....	8	2	A	Thatcher.....	—	—	36	—	60	2 Nor.	I.
				Viking.....	14.2	\$39.05	22	—	54	1 C.W.	
				Royal.....	11.8	32.45	22	—	53	1 C.W.	S.G.
Wheat yields discarded. Harvested slightly green.											
CAMERON KIRK, COLMER											
3C.....	8	3	A	Thatcher.....	39.8	\$53.73	38	87	62	2 Nor.	G.I.
				Viking.....	14.4	39.60	17	106	56	1 C.W.	
				Royal.....	14.3	39.32	19	108	56	1 C.W.	
No significant grain yield difference between varieties.					(Flax only)						

*Insufficient to calculate bushel weight.
(E) Estimated grade.

Wheat Pool District 11—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed-ing to ripening	Lbs. per measured bushel	Com-mercial grades	Grading remarks
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JAMES BELL, EATONIA

1B.....	11	4	A	Thatcher.....	3.3	\$3.99	12	94	49	6 Spec.	
				Viking.....	—	—	—	—	—	—	
				Royal.....	—	—	—	—	—	—	

No flax samples received. Destroyed by drought.

TORGER M. JOHNSON, MARENGO

1B.....	11	5	A	Thatcher.....	8.4	\$10.75	20	112	54	4 Spec.	
				Viking.....	—	—	—	—	—	—	
				Royal.....	—	—	—	—	—	—	

No flax samples received.

ALEXANDER BARRETT, FISKE

1A.....	11	8	A	Thatcher.....	3.2	\$4.09	14	88	54	4 Spec.	
				Viking.....	1.5	4.12	12	88	*	(E) 1 C.W.	
				Royal.....	2.1	5.77	12	88	*	(E) 1 C.W.	

No significant grain yield difference between varieties. (Flax only)

ANGEL J. SUNDBY, FUSILIER

1B	11	10	B	Thatcher.....	18.3	\$23.42	20	—	58	4 Nor.	F., G.
				Viking.....	—	—	10	—	*	(E) 1 C.W.	
				Royal.....	—	—	18	—	*	(E) 1 C.W.	

Flax yields discarded. Badly shattered.

Tests discarded on account of damage by drought, pests, hail or other causes.

1B.....	11	3	A	Alvin L. Kelm, Glidden.							
2F.....	11	3	B	Wm. F. Sheasby, Eston.							
1A.....	11	6	A	Stewart Lewis, Kindersley.							
2F.....	11	7	A	Wm. J. Garland, Rosetown.							
1A.....	11	9	A	Earl R. Barberree, Beaufield.							
1B.....	11	10	A	Anthony R. Reiss, Major.							

WHEAT POOL DISTRICT 12

ROBERT L. CHARTERIS, DODSLAND

2D.....	12	4	A	Thatcher.....	11.9	\$14.16	18	124	56	Fd.	F.
				Viking.....	4.1	11.11	7	124	50	2 C.W.	F.
				Royal.....	7.9	21.41	9	124	51	2 C.W.	F.

No significant grain yield difference between varieties. (Flax only)

DONALD H. DAVISSON, UNITY

2D.....	12	7	A	Thatcher.....	22.8	\$30.78	25	99	62	2 Nor.	B. Bl.
				Viking.....	—	—	15	124	—	—	
				Royal.....	—	—	15	124	—	—	

No flax samples received. Destroyed by snow.

IRENE F. HIAR, MARSDEN

2D.....	12	8	A	Thatcher.....	55.4	\$73.68	—	—	64	3 Nor.	G.I.
				Viking.....	22.0	59.62	—	—	54	2 C.W.	G.I.
				Royal.....	15.6	40.87	—	—	55	3 C.W.	G.I.

Necessary difference (Flax only)—2.4 bushels.

JAMES E. NELSON, PRONGUA

3E.....	12	10	A	Thatcher.....	34.8	\$48.02	28	101	62	1 Nor.	
				Viking.....	13.1	36.02	12	108	53	1 C.W.	
				Royal.....	15.2	41.80	16	110	51	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

Tests discarded on account of damage by drought, pests, hail or other causes.

2D.....	12	1	A	Harold P. Watson, Biggar.							
2D.....	12	2	A	Alexander Marchuk, Cando.							
2D.....	12	5	A	Thomas J. Barth, Tako.							
2D.....	12	6	A	W. Laurence Feil, Cactus Lake.							
3E.....	12	9	A	Ottar R. Veikle, Cutknife.							

*Insufficient to calculate bushel weight.
(E) Estimated grade.

WHEAT POOL DISTRICT 13

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed-ing to ripening	Lbs. per meas-ured bushel	Com-mercial grades	Grading remarks
WILLIAM H. BROTCHE, YOUNG											
2B.....	13	2	A	Thatcher.....	22.2	\$29.97	20	85	61	2 Nor.	B. Bl.
				Viking.....	4.5	12.37	14	91	54	1 C.W.	
				Royal.....	4.9	13.47	15	92	53	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

LORNE E. FREEDEN, DUNDURN											
2B.....	13	3	A	Thatcher.....	—	—	30	—	—	—	
				Viking.....	—	—	10	—	—	—	
				Royal.....	—	—	12	—	—	—	

Yields discarded. Badly shattered.

ELIZABETH PROCYSHEN, BLUCHER											
2B.....	13	4	A	Thatcher.....	16.4	\$22.14	19	94	60	2 Nor.	Pk. I.
				Viking.....	4.5	12.19	9	108	50	2 C.W.	
				Royal.....	7.5	20.32	15	107	50	2 C.W.	

Necessary difference (Flax only)—1.2 bushels

SYDNEY S. HOPE, GEN. DEL., SASKATOON											
2B.....	13	5	A	Thatcher.....	46.1	\$59.01	—	—	62	4 Nor.	F., G.
				Viking.....	14.1	36.94	—	—	49	3 C.W.	G., I.
				Royal.....	28.0	73.36	—	—	50	3 C.W.	F., G.

No significant grain yield difference between varieties. (Flax only)

GLEN A. SHOCKEY, VANSKOY											
2B.....	13	6	A	Thatcher.....	10.5	\$13.12	18	—	52	5 Spec.	
				Viking.....	—	—	10	—	—	—	
				Royal.....	—	—	11	—	—	—	

No flax samples received.

EMILE DETILLIEUX, VONDA											
2B.....	13	8	A	Thatcher.....	9.2	\$12.42	14	—	61	2 Nor.	B. Bl.
				Viking.....	2.7	—	9	—	(1.)	(1.)	
				Royal.....	3.6	—	11	—	(1.)	(1.)	

(1)—Insufficient for bushel weight or grade.

DONALD SCHMITZ, ENGLEFELD											
3C.....	13	11	A	Thatcher.....	21.9	\$29.56	34	—	61	2 Nor.	B. Bl.
				Viking.....	—	—	14	—	—	—	
				Royal.....	—	—	14	—	—	—	

Flax yields discarded. Insufficient for analysis.

Tests discarded on account of damage by drought, pests, hail or other causes.

3C.....	13	1	A	Charles G. Coates, Leroy.
2B.....	13	4	B	John Safinuk, Colonsay.
2B.....	13	9	A	Peter Misiura, Dana.
3B.....	13	10	A	Lawrence Poppel, Pilger.

WHEAT POOL DISTRICT 14

GUNTHER HILBIG, KUROIKI											
3C.....	14	1	A	Thatcher.....	39.8	\$54.92	29	103	63	1 Nor.	
				Viking.....	6.2	17.05	17	105	56	1 C.W.	
				Royal.....	8.0	22.00	18	105	55	1 C.W.	S.G.

No significant grain yield difference between varieties. (Flax only)

RONALD E. CHOQUETTE, PERIGORD											
3B.....	14	5	A	Thatcher.....	36.8	\$44.53	34	107	62	No. 6	F.
				Viking.....	10.8	29.27	17	119	51	2 C.W.	F.
				Royal.....	15.7	42.55	17	119	52	2 C.W.	F.

No significant grain yield difference between varieties. (Flax only)

ALLEN F. LAYFIELD, PRAIRIE RIVER											
3F.....	14	6	A	Thatcher.....	35.1	\$46.68	28	115	61	3 Nor.	G.I.
				Viking.....	6.9	18.70	10	115	51	2 C.W.	G.
				Royal.....	10.3	27.91	12	115	50	2 C.W.	G.

No significant grain yield difference between varieties. (Flax only)

ERIC. W. HEMSLEY, SYLVANIA											
3F.....	14	7	A	Thatcher.....	39.3	\$53.05	37	100	63	2 Nor.	Stch.
				Viking.....	7.9	21.72	27	109	54	1 C.W.	
				Royal.....	9.5	26.12	29	109	54	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

Wheat Pool District 14—Continued

Cereal Variety Zone	Dist.	Sub- Dist.	Test desig- nation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed- ing to ripening	Lbs. per meas- ured bushel	Com- mercial grades	Grading remarks
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LAURENCE W. VIGRASS, PATHLOW

3F.....	14	8	A	Thatcher.....	33.6	\$46.37	27	107	64	1 Nor.	
				Viking.....	16.8	46.20	11	114	54	1 C.W.	
				Royal.....	18.0	49.50	14	111	53	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

ALBERT ENGLAND, JORDAN RIVER

3F.....	14	10	A	Thatcher.....	24.7	\$34.09	35	108	63	1 Nor.	
				Viking.....	—	—	—	—	—	—	
				Royal.....	—	—	—	—	—	—	

No flax samples received. Destroyed by birds.

Tests discarded on account of damage by drought, pests, hail or other causes.

3C.....	14	2	A	Milton B. Weigel, Quill Lake.							
4A.....	14	3	A	James F. Biehn, Lac Vert.							

WHEAT POOL DISTRICT 15

ALEXANDER SEREDA, ST. JULIEN

3E.....	15	2	A	Thatcher.....	39.4	\$54.37	—	98	63	1 Nor.	
				Viking.....	12.5	34.37	—	101	54	1 C.W.	
				Royal.....	23.0	63.25	—	101	53	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

JOSEPH BLANCHARD, DUCK LAKE

3E.....	15	3	A	Thatcher.....	35.7	\$48.19	27	106	62	2 Nor.	I.
				Viking.....	3.0	7.86	18	111	48	3 C.W.	
				Royal.....	4.9	12.84	18	113	47	3 C.W.	

No significant grain yield difference between varieties. (Flax only)

ABE E. FRIESEN, ROSTHERN

3E.....	15	4	A	Thatcher.....	28.5	\$39.33	30	106	64	1 Nor.	
				Viking.....	9.7	26.67	18	117	56	1 C.W.	
				Royal.....	12.0	33.00	18	104	53	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

HERBERT T. MAYO, SHELL LAKE

4B.....	15	6	A	Thatcher.....	24.9	\$33.12	26	95	64	3 Nor.	G.I.
				Viking.....	7.1	19.52	14	100	55	1 C.W.	
				Royal.....	14.9	40.38	16	103	54	2 C.W.	G.I.

No significant grain yield difference between varieties. (Flax only)

IRVIN W. JUNG, MONT NEBO

3E.....	15	7	A	Thatcher.....	35.5	\$48.99	—	—	64	1 Nor.	
				Viking.....	18.8	51.70	—	—	56	1 C.W.	
				Royal.....	13.7	37.13	—	—	55	2 C.W.	D.G.

No significant grain yield difference between varieties. (Flax only)

HERBERT L. MASON, MARCHANT GROVE

3E.....	15	8	A	Thatcher.....	34.9	\$48.16	31	116	64	1 Nor.	
				Viking.....	16.5	45.37	15	120	55	1 C.W.	
				Royal.....	7.1	19.52	18	104	53	1 C.W.	S.G.

Necessary difference (Flax only)—1.5 bushels.

BORIS A. BEREZOWSKY, MEATH PARK

4B.....	15	10	A	Thatcher.....	81.1	\$103.81	38	—	62	4 Nor.	F.
				Viking.....	8.5	23.03	13	—	54	2 C.W.	F.
				Royal.....	15.0	40.65	16	—	55	2 C.W.	F.

No significant grain yield difference between varieties. (Flax only)

TONY KUZKY, MEATH PARK

4B.....	15	10	B	Thatcher.....	48.1	\$64.93	30	100	64	2 Nor.	V. Stch.
				Viking.....	12.6	34.65	12	105	55	1 C.W.	
				Royal.....	12.9	35.47	15	110	54	1 C.W.	

No significant grain yield difference between varieties. (Flax only)

Tests discarded on account of damage by drought, pests, hail or other causes.

4B.....	15	9	A	Robert K. Irving, Spruce Home.							
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WHEAT POOL DISTRICT 16

Cereal Variety Zone	Dist.	Sub- Dist.	Test desig- nation	Varieties	Yield bus. per acre	Cash value per acre	Plant height in inches	Days seed- ing to ripening	Lbs. per meas- ured bushel	Com- mercial grades	Grading remarks
THOMAS K. SIMMONDS, SPEERS											
3E.....	16	2	A	Thatcher.....	8.3	\$11.20	12	91	60	2 Nor.	B. Bl.
				Viking.....	1.3	3.57	8	101	52	1 C.W.	
				Royal.....	2.8	7.70	10	102	53	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
ALLEN L. PIPER, NORTH BATTLEFORD											
3E.....	16	3	A	Thatcher.....	—	—	—	—	—	—	
				Viking.....	10.1	\$27.37	11	77	51	2 C.W.	G.I.
				Royal.....	13.4	35.10	14	77	52	3 C.W.	G.I.
No wheat samples received. Destroyed by stock.											
FRANKLIN J. VICK, ST. WALBURG											
4B.....	16	7	A	Thatcher.....	47.6	\$63.31	—	—	63	3 Nor.	F., I.
				Viking.....	12.1	32.79	—	—	52	2 C.W.	G., I.
				Royal.....	8.6	22.53	—	—	52	3 C.W.	D.G., I.
No significant grain yield difference between varieties. (Flax only)											
R. SPENCER WOOFF, CLEEVES											
3E.....	16	8	A	Thatcher.....	20.3	\$28.01	24	111	62	1 Nor.	
				Viking.....	2.8	7.59	6	133	50	2 C.W.	
				Royal.....	6.0	15.72	12	130	49	3 C.W.	
Necessary difference (Flax only)—1.4 bushels.											
DONALD J. HEYDEN, BELBUTTE											
4B.....	16	9	A	Thatcher.....	21.0	\$26.88	36	103	61	4 Nor.	F., G.I.
				Viking.....	8.4	23.10	16	103	54	1 C.W.	
				Royal.....	7.1	19.24	16	103	53	2 C.W.	G.I.
No significant grain yield difference between varieties. (Flax only)											
DOROTHY HAWKINS, BAPAUME											
4B.....	16	10	A	Thatcher.....	20.1	\$27.13	22	—	64	2 Nor.	V. Stch.
				Viking.....	4.7	12.92	12	—	54	1 C.W.	
				Royal.....	4.1	11.27	16	—	53	1 C.W.	
No significant grain yield difference between varieties. (Flax only)											
WALTER ILNESKY, RANGER											
4B.....	16	10	B	Thatcher.....	67.0	\$92.46	41	—	64	1 Nor.	
				Viking.....	30.9	84.97	19	—	55	1 C.W.	
				Royal.....	21.0	56.91	24	—	54	2 C.W.	D.G.
No significant grain yield difference between varieties. (Flax only)											
HOWARD V. HALPENNY, DORINTOSH											
4B.....	16	11	B	Thatcher.....	—	—	—	—	—	—	
				Viking.....	10.2	\$28.05	—	—	51	1 C.W.	
				Royal.....	3.4	9.21	—	—	52	2 C.W.	F.
Samples incomplete.											
Tests discarded on account of damage by drought, pests, hail or other causes.											
3E.....	16	1	A	J. Frank Saunders, Borden.							
3E.....	16	4	A	C. Ralph Mair, Prince.							
3E.....	16	5	A	Kenneth W. Wesson, Maidstone.							
4B.....	16	11	A	Lydia Rosenberger, Goodsoil.							

BARLEY TESTS

DESCRIPTION OF VARIETIES

PLUSH is a six-rowed, smooth-awned variety originated at the Brandon Experimental Station from a cross made between Lion \times Bearer. It is susceptible to rusts and smuts. This variety is eligible for grade 3 CW Yellow.

WARRIOR is an early maturing hooded (awnless) variety originated by the Field Husbandry Department of the University of Saskatchewan from the cross Trebi \times Colsess. It is susceptible to rust and covered smut, but is resistant to loose smut. This variety is eligible for the feed grades.

TITAN is a six-rowed smooth-awned variety originated at the University of Alberta from the cross Trebi \times Galbron. It is highly resistant to loose smut but is susceptible to rusts and covered smut. This variety is eligible for the feed grades.

TREGAL is a six-rowed smooth-awned feed variety produced by the North Dakota Experimental Station from the cross Trebi \times Regal. It is susceptible to rusts and smuts. This variety is eligible for the feed grades.

COMPANA is a two-rowed semi-smooth-awned white seeded variety of hybrid barley developed through the combined efforts of the Montana Agricultural Experiment Station and the United States Department of Agriculture. Compana was one of many selections made at Aberdeen, Idaho, from a tenth generation composite of 32 different crosses. It is resistant to loose smut and moderately resistant to covered smut, but susceptible to rusts. This variety is eligible for the feed grades.

O.A.C. 21 is a nodding, six-rowed rough-awned malting variety with greenish blue seeds. It was produced by selection from Manchuria at the Ontario Agricultural College and is the standard malting variety of Canada. This variety is susceptible to rusts and smuts. O.A.C. 21 is eligible for grade 1 CW 6-Row.

MONTCALM is a six-rowed smooth-awned blue seeded variety which resembles O.A.C. 21 in many respects. It was produced at MacDonald College, Quebec, by Professor E. A. Lods from the cross Black Barbless \times a blue



The most northerly Barley Test in the Province, supervised by Harry Konotopski, Rapid View.

Manchurian selection. Montcalm is a high quality malting variety eligible for grade 1 CW 6-Row. It is susceptible to rusts and smuts.

TABLE No. 6.—AVERAGE YIELDS IN BUSHELS PER ACRE SUMMARIZED BY CEREAL VARIETY ZONES AND GROUPED ZONES

Cereal Variety Zone	No. of satisfactory tests	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcalm	Necessary difference in bus.
1A & 2C.....	19	18.9	22.9	23.6	19.5	20.7	—	—	2.4
1B.....	3	3.9	7.4	7.8	6.9	7.6	—	—	3.0
2A.....	4	37.2	37.9	40.6	35.9	41.4	—	—	5.6
2B, 2E & 2F..	15	28.9	28.3	32.2	29.3	29.4	—	—	3.7
2D.....	3	23.0	27.2	26.2	27.7	24.6	—	—	5.7
3A.....	3	44.9	37.2	41.4	—	—	32.6	40.4	10.9
3B.....	4	58.7	45.0	50.9	—	—	43.4	54.2	*
3C.....	12	42.9	36.7	43.1	—	—	34.7	41.3	3.4
3D & 3F.....	4	76.4	63.6	63.9	—	—	62.0	73.4	7.3
3E (East).....	5	62.0	52.9	53.9	—	—	51.4	54.9	*
3E (West).....	7	30.9	27.7	28.8	—	—	22.6	27.2	4.5
4A & 4B.....	6	62.2	49.6	57.8	—	—	57.2	58.0	5.2

*No significant grain yield difference between varieties.

GRAIN YIELD

The bulk of Saskatchewan's malting barley is produced in an area in the east, north-east, and north of the Province. This region is made up of the following Zones: 3A, 3B, 3C, 3D, 3E, 3F, 3H, 4A and 4B. The tests conducted over the area include two malting varieties, O.A.C. 21 and Montcalm, which take the place of two feed varieties, Tregal and Compana, which were used in the area designated by Zone numbers 1 and 2. The latter area is comprised of Zones 1A, 1B, 2A, 2B, 2C, 2D, 2E and 2F and the barley grown therein is used mainly for feed purposes.

Considering the area where the feed varieties, Tregal and Compana, were sown, it is noticeable that Titan excelled in three zones. Titan was second, however, in Zone 2A where it was outyielded by Compana. The yield difference in this case was not significant. In Zone 2D Titan ranked third, being outyielded by Tregal and Warrior. Again the difference was not significant. On the basis of these results Titan proved superior, with Compana and Warrior yielding equally well in second place. Tregal ranked fourth in the feed variety area, with Plush showing relatively poor yields in last place.

An interesting feature of the 1945 test is to be seen in the yield performance of Plush when grown under the relatively dry conditions which occurred in the area designated by the Zone Numbers 1 and 2 compared to its showing in the areas of the Province designated by the Zone Numbers 3 and 4 where moisture conditions were highly satisfactory. While Plush was outyielded by all other varieties in the poor moisture areas this variety definitely excelled in the areas where rainfall was plentiful. In six of the seven areas where the malting varieties, O.A.C. 21 and Montcalm, were used instead of the feed varieties, Tregal and Compana, Plush exceeded all other varieties. Plush was outyielded by Titan in Zone 3C. This record would suggest that Plush is an excellent yielder under good moisture conditions but is definitely inferior when grown under conditions of poor moisture. Titan ranked second in yield among the feed barley varieties grown throughout the areas designed by the Zone Numbers 3 and 4. Warrior was outyielded by both Titan and Plush in every case. Of the varieties recommended for malting, Montcalm proved definitely superior to O.A.C. 21, outyielding the latter variety in every zone.

AVERAGE HEIGHT OF PLANTS

Table No. 7 gives the average height of plants for each variety by Cereal Variety Zones. Considering the feed barley zones where Tregal and Compana were grown, the relatively excellent height of the Plush variety is outstanding. Out of the five areas, Plush excelled in four and equalled

TABLE No. 7.—AVERAGE HEIGHT OF PLANTS IN INCHES SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcarm
1A & 2C.....	20.8	19.7	19.9	20.1	18.1	—	—
1B.....	17.0	15.7	17.0	16.5	13.5	—	—
2A.....	26.7	25.3	26.3	25.7	20.3	—	—
2B, 2E & 2F.....	23.4	21.6	22.2	21.6	18.2	—	—
*2D.....	22.0	19.0	20.0	19.0	18.0	—	—
3A.....	28.0	28.0	29.2	—	—	31.2	30.7
3B.....	40.5	37.5	38.5	—	—	40.0	39.5
3C.....	29.8	25.4	28.0	—	—	29.8	30.1
3D & 3F.....	35.5	30.7	33.0	—	—	37.2	37.2
3E (East).....	34.5	28.7	31.0	—	—	37.0	36.2
3E (West).....	22.7	18.9	20.1	—	—	22.1	23.9
4A & 4B.....	33.2	28.2	32.2	—	—	32.2	31.0

*Results of only one test available.

Titan in the fifth. Titan ranked second in average height for the feed barley areas and Tregal followed in third place, Warrior was fourth in average height and Compana, showing definite shortness in straw, was fifth. In the areas where O.A.C. 21 and Montcarm malting varieties were grown instead of Tregal and Compana, O.A.C. 21 excelled in height, followed very closely by Montcarm and Plush. Titan was fourth and Warrior proved definitely shorter than all other varieties.

TABLE No. 8.—AVERAGE NUMBER OF DAYS FROM SOWING TO RIPENING SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcarm
1A & 2C.....	93.8	89.6	91.4	93.2	91.8	—	—
1B.....	90.0	88.0	89.3	89.6	87.3	—	—
*2A.....	78.0	74.0	74.0	78.0	74.0	—	—
2B, 2E & 2F.....	92.0	85.4	89.2	90.7	88.4	—	—
*2D.....	83.0	77.0	78.0	83.0	78.0	—	—
3A.....	93.5	93.5	94.5	—	—	94.5	93.5
3B.....	94.5	85.0	88.5	—	—	95.0	97.0
3C.....	91.7	82.1	86.5	—	—	88.7	89.9
3D & 3F.....	88.5	81.0	86.7	—	—	88.7	91.0
3E (East).....	94.7	88.7	92.7	—	—	94.0	96.5
3E (West).....	97.1	90.3	94.3	—	—	95.6	98.8
4A & 4B.....	93.5	85.5	90.2	—	—	91.2	92.0

*Results of only one test available.

DAYS FROM SOWING TO RIPENING

In nine out of the twelve areas Warrior exceeded all other varieties in earliness. It showed definite superiority in this respect. In the zones where five feed varieties were used Compana generally ranked second with Titan a close third. In the zones where malting varieties were included instead of Tregal and Compana, Titan ranked second. Tregal came fourth

TABLE No. 9.—AVERAGE STRAW STRENGTH OF PLANTS ON THE BASIS 10 (strong) 0 (weak) SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcarm
1A & 2C.....	8.9	9.4	8.9	8.9	8.3	—	—
1B.....	8.5	8.6	8.3	8.3	7.3	—	—
2A.....	9.3	9.1	8.6	9.6	8.2	—	—
2B, 2E, & 2F.....	8.9	9.0	8.8	8.7	8.1	—	—
*2D.....	9.0	10.0	9.0	9.0	7.2	—	—
3A.....	9.6	9.1	9.1	—	—	9.1	8.5
3B.....	7.1	9.5	7.1	—	—	4.8	4.3
3C.....	8.8	7.5	8.9	—	—	7.3	8.0
3D & 3F.....	7.0	8.0	8.2	—	—	5.1	6.4
3E (East).....	9.4	9.2	9.4	—	—	7.3	8.4
3E (West).....	8.6	8.5	9.3	—	—	8.3	8.7
4A & 4B.....	6.8	7.6	7.7	—	—	6.9	7.5

*Results of only one test available.

in the feed variety areas and generally Plush was later than any other variety. Of the two malting varieties, O.A.C. 21 showed earlier characteristics than Montcalm. The latter variety averaged slightly later than Plush in time required for maturity.

STRAW STRENGTH

The average straw strength of varieties by zones is shown in Table No. 9. In the feed barley areas Warrior showed a slight superiority in strength of straw. Plush ranked second and Titan approximately equalled Tregal for third place. Compana proved weaker than all other varieties in every zone. In the areas where the malting varieties, O.A.C. 21 and Montcalm, were grown, the feed varieties showed variable strength of straw but generally were somewhat stronger than O.A.C. 21 and Montcalm. Of these two varieties Montcalm appeared to show slightly better average straw strength than O.A.C. 21.

TABLE No. 10.—AVERAGE NECK STRENGTH OF PLANTS ON BASIS 1 (Strong), 2 (Medium) 3 (Weak)—SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcalm
1A & 2C.....	1.7	1.4	1.6	1.7	1.7	—	—
1B.....	1.9	1.2	1.2	1.6	1.6	—	—
2A.....	1.6	1.2	1.5	1.8	1.2	—	—
2B, 2E, & 2F.....	1.6	1.7	1.7	1.7	1.5	—	—
*2D.....	2.0	1.0	1.0	1.0	2.0	—	—
3A.....	1.3	1.4	1.4	—	—	1.2	1.7
3B.....	2.0	1.0	1.5	—	—	2.5	2.4
3C.....	1.5	1.5	1.5	—	—	2.2	1.8
3D & 3F.....	1.6	1.0	1.2	—	—	2.3	2.3
3E (East).....	1.5	1.4	1.6	—	—	2.7	2.1
3E (West).....	1.7	1.5	1.5	—	—	2.1	1.7
4A & 4B.....	1.4	1.3	1.2	—	—	2.3	1.4

*Results of only one test available.

NECK STRENGTH

Average neck strength of varieties by Cereal Variety Zones is shown in Table No. 10. Although, in the feed barley zones, only slight variation was evident between all varieties it would appear that Warrior ranked first, followed by Titan, Tregal, Compana and Plush, in that order. In the areas where the malting varieties, O.A.C. 21 and Montcalm, were used, the feed barleys excelled with Montcalm fourth, the latter variety being slightly better than O.A.C. 21, which showed a rather weak neck.

TABLE No. 11.—AVERAGE WEIGHT PER MEASURED BUSHEL SUMMARIZED BY CEREAL VARIETY ZONES

Cereal Variety Zone	Plush	Warrior	Titan	Tregal	Compana	O.A.C. 21	Montcalm
1A & 2C.....	44.3	40.6	47.1	45.7	46.5	—	—
1B.....	40.8	37.6	44.8	42.0	42.6	—	—
2A.....	47.2	43.0	49.0	47.2	46.5	—	—
2B, 2E, & 2F.....	44.0	38.6	46.4	44.9	45.5	—	—
2D.....	42.3	39.7	43.3	44.0	45.7	—	—
3A.....	48.7	43.0	50.7	—	—	48.7	49.5
3B.....	48.2	41.6	49.4	—	—	49.6	49.6
3C.....	46.3	42.1	48.8	—	—	45.4	47.9
3D & 3F.....	47.5	44.7	48.5	—	—	48.2	49.7
3E (East).....	47.4	41.4	48.2	—	—	46.4	48.8
3E (West).....	46.6	42.5	47.3	—	—	45.5	48.1
4A & 4B.....	47.0	44.1	48.1	—	—	47.5	49.4

WEIGHT PER MEASURED BUSHEL

Titan exceeded all other feed varieties in bushel weight. It produced the highest bushel weight in every zone except 2D where Compana exceeded the former variety. In the areas designated by the Zone Numbers 3 and 4 where the malting varieties O.A.C. 21 and Montcalm were grown, Montcalm exceeded O.A.C. 21 in every zone except 3B, where the bushel weights of these two varieties were equal. Compana ranked second in the feed barley zones and Tregal came third. Plush ranked fourth among the feed varieties, and Warrior, showing very poor bushel weight, was last.

TABLE No. 12.—COMMERCIAL GRADES IN PERCENTAGE

	1 C.W. 6-Row %	2 C.W. 6-Row %	3 C.W. 6-Row %	3 C.W. Yellow %	1 Feed %	2 Feed %	3 Feed %
Plush.....	—	—	—	45.4	15.4	24.8	14.4
Warrior.....	—	—	—	—	13.4	36.1	50.5
Titan.....	—	—	—	—	78.3	11.4	10.3
Tregal.....	—	—	—	—	56.2	14.6	29.2
Compana.....	—	—	—	—	54.2	18.7	27.1
O.A.C. 21.....	6.1	22.4	28.6	—	14.3	24.5	4.1
Montcalm.....	14.3	24.5	30.7	—	26.5	2.0	2.0

COMMERCIAL GRADES

Table No. 12 shows the percentage of each commercial grade by varieties. All grades have been established in accordance with the regulations laid down by the Board of Grain Commissioners. In studying this table it must be remembered that some of the varieties are restricted to certain grade ceilings. Although the bushel weight of the sample may be suitable for the 1 CW 6-Row grade, the sample still may not be given that grade simply because it has been restricted to the feed class. Following is a list of varieties with the grades in which they may be placed: **PLUSH**—3 CW yellow and all feed grades; **WARRIOR**—all feed grades; **TITAN**—all feed grades; **TREGAL**—all feed grades; **COMPANA**—all feed grades; **O.A.C. 21**—1, 2, and 3 CW 6-Row and all feed grades. This variety cannot be graded 2 or 3 CW yellow. **MONTCALM**—1, 2, and 3 CW 6-Row and all feed grades. This variety cannot be graded 2 or 3 CW yellow.

Plush graded reasonably well, almost 50% of this variety being placed in the 3 CW yellow grade. Titan excelled among the varieties restricted to feed grades, with Tregal, Compana and Warrior following in that order. In the malting class Montcalm showed distinctly better grades than the O.A.C. 21 variety.

SUMMARIZATION ACCORDING TO CEREAL VARIETY ZONES

Probably the most useful summarization from this series of variety tests is that which shows for each Cereal Variety Zone the data on the different varieties for each important characteristic. In the following tables and discussions the data have been studied on the basis of these Cereal Variety Zones. Where the number of tests in a zone has not been sufficient to give an accurate average for the area, the tests from two or more zones with similar soil and climatic conditions have been grouped together. In contrast, Zone 3E has been divided because moisture conditions varied considerably. While the eastern part of Zone 3E received an abundance of moisture, the western area generally suffered from drought conditions. For purposes of analysis Zone 3E has been divided by projecting a straight line through the town of Leask to the north and Hague to the south. All tests located east of the line are considered in Zone 3E (East) and tests located to the west of the line are considered to be in Zone 3E (West).

TABLE No. 13.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONES 1A and 2C
(19 satisfactory tests)

	Plush	Warrior	Titan	Tregal	Compana
Yield in bushels per acre.....	18.9	22.9	23.6	19.5	20.7
Height in inches.....	20.8	19.7	19.9	20.1	18.1
Days from seeding to ripening.....	93.8	89.6	91.4	93.2	91.8
Straw strength.....	8.9	9.4	8.9	8.9	8.3
Neck strength.....	1.7	1.4	1.6	1.7	1.7
Bushel weight in lbs.....	44.3	40.6	47.1	45.7	46.5
Necessary grain yield difference—2.4 bushels.					
Commercial grades in percentage.					
3 C.W. yellow.....	36.8	—	—	—	—
1 Feed.....	5.3	5.3	68.4	63.1	52.6
2 feed.....	36.8	36.8	26.3	15.8	31.6
3 feed.....	21.1	57.9	5.3	1.1	15.8

CEREAL VARIETY ZONES 1A AND 2C

The results for Zones 1A and 2C are shown in Table No. 13.—**TITAN** excelled in yield, exceeding all varieties but **Warrior** by more than the necessary difference. **Titan** produced the highest bushel weight and proved satisfactory in height, earliness, straw and neck strength. The results indicate that **Titan** is the most suitable variety for this zone. **COMPANA** showed an average yield and good bushel weight, but was short in straw. **TREGAL** showed relatively good bushel weight and height, but was late ripening and low in yield. **PLUSH** excelled in height, had average bushel weight, neck and straw strength, but its poor yield and late ripening characteristics would indicate unsuitability for use in this area. **WARRIOR**, the only hooded variety used, yielded fairly well, being exceeded only by **Titan**. **Warrior** ripened two days ahead of **Titan**, its closest competitor in this regard. It excelled in straw and neck strength, but had extremely poor bushel weight, averaging 6.5 lbs. less than **Titan** in this respect.

General Yield Performance During Past Six Years

TITAN has been used in Wheat Pool Tests for the past two years. Ranked second to **Plush** in 1944, excelled in 1945. **WARRIOR**, grown in 1942 and 1945, yielded seventh and last in 1942, second in 1945. **COMPANA**, grown in 1944 and 1945, yielded fourth out of six varieties in 1944, third in 1945. **TREGAL** not used before 1945. **PLUSH** has been used during four of the past six years. Outyielded all other varieties in 1943 and 1944, gave an average performance in 1942, and was low in yield for 1945. The record of this variety would indicate that it is satisfactory under good moisture conditions but unsuitable for use in an area where moisture is not generally plentiful.

TABLE No. 14.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 1B
(3 satisfactory tests)

	Plush	Warrior	Titan	Tregal	Compana
Yield in bushels per acre.....	3.9	7.4	7.8	6.9	7.6
Height in inches.....	17.0	15.7	17.0	16.5	13.5
Days from seeding to ripening.....	90.0	88.0	89.3	89.6	87.3
Straw strength.....	8.5	8.6	8.3	8.3	7.3
Neck strength.....	1.9	1.2	1.2	1.6	1.6
Bushel weight in lbs.....	40.8	37.6	44.8	42.0	42.6
Necessary grain yield difference—3.0 bushels.					
Commercial grades in percentage.					
1 feed.....	—	—	60.0	20.0	40.0
2 feed.....	40.0	—	—	20.0	—
3 feed.....	60.0	100.0	40.0	60.0	60.0

CEREAL VARIETY ZONE 1B

Summarized results for Zone 1B are shown in Table No. 14. **TITAN** produced the best yield, closely followed by **Compana**, **Warrior** and **Tregal**. However, no significance in yield was shown except in the case of **Plush**, which was outyielded by all other varieties by differences which equalled or exceeded the necessary difference. **Titan** was higher in bushel weight than any other variety and proved satisfactory in height, straw and neck strength. **COMPANA** was second in yield, but showed shorter and weaker straw than any other variety. It excelled in earliness and had average neck strength and bushel weight. **WARRIOR** ranked third in yield, excelled in straw strength. **Warrior** showed inferiority in bushel weight and commercial grades. **TREGAL** gave only an average performance. **PLUSH** was significantly outyielded by all other varieties, was late to mature and weakest in neck strength.

General Yield Performance During Past Six Years

TITAN was used in 1944 when it ranked fifth in yield out of six varieties. In 1945 it was the highest yielder. **COMPANA** was third in 1944 and second in 1945. **WARRIOR**, used in 1942 and 1945, was outyielded by all other varieties in 1942 and ranked third in 1945. **TREGAL** not used previous to 1945. **PLUSH** has been tested during four of the past six years

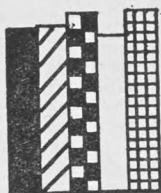
Histograms showing Relative Grain Yields of Barley Varieties.



ZONES 1A AND 2C



1B



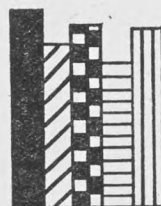
2A



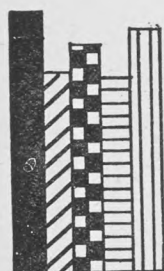
ZONES 2B, 2E AND 2F



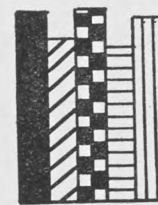
2D



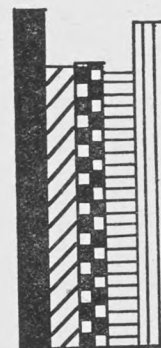
3A



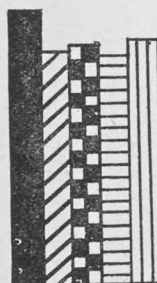
ZONES 3B



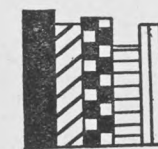
3C



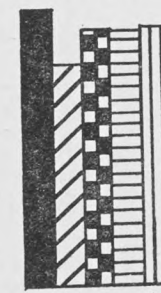
3D AND 3F



ZONES 3E (EAST)



3E (WEST)



4A AND 4B

PLUSH



WARRIOR



TITAN



TREGAL



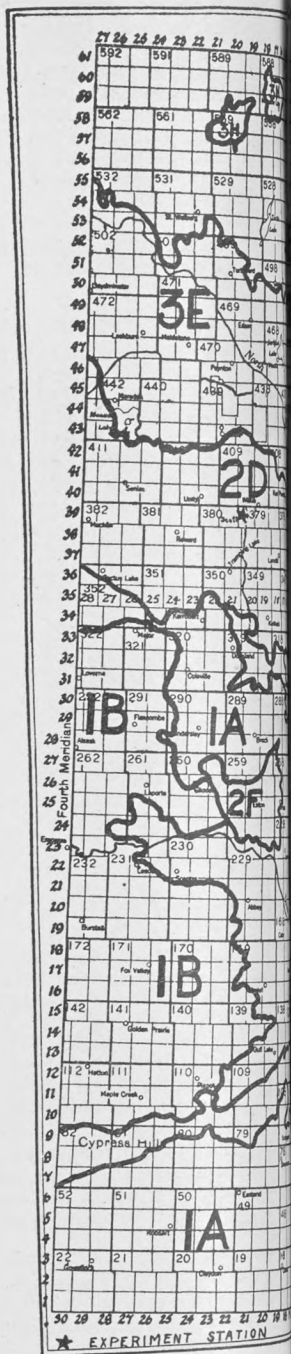
COMPANA



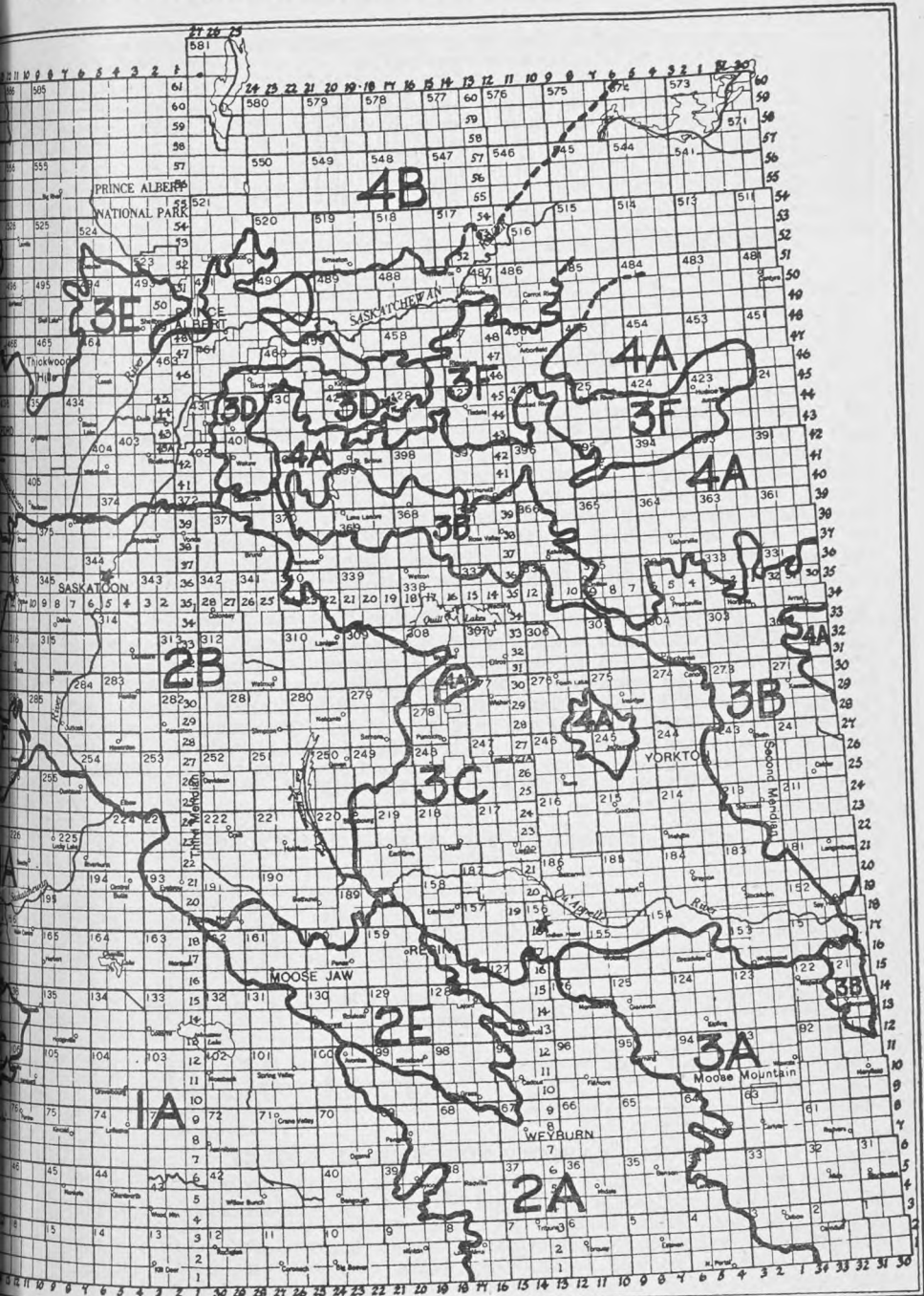
O.A.C. 21



MONTCAIM.



Cereal Variety Zones of Saskatchewan



Outyielded all other varieties in 1943 and 1944, gave an average performance in 1942 and was inferior in 1945.

TABLE No. 15.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 2A
(4 satisfactory tests)

	Plush	Warrior	Titan	Tregal	Compana
Yield in bushels per acre.....	37.2	37.9	40.6	35.9	41.4
Height in inches.....	26.7	25.3	26.3	25.7	20.3
Days from seeding to ripening.....	78.0	74.0	74.0	78.0	74.0
Straw strength.....	9.3	9.1	8.6	9.6	8.2
Neck strength.....	1.6	1.2	1.5	1.8	1.2
Bushel weight in lbs.....	47.2	43.0	49.0	47.2	46.5
Necessary grain yield difference—5.6 bushels.					
Commercial grades in percentage.					
3 C.W. yellow.....	50.0	—	—	—	—
1 feed.....	50.0	25.0	100.0	75.0	75.0
2 feed.....	—	50.0	—	25.0	25.0
3 feed.....	—	25.0	—	—	—

CEREAL VARIETY ZONE 2A

Summarized results for Zone 2A are shown in Table No. 15. None of the varieties significantly outyielded another. However, **COMPANA** was high in yield, followed by Titan, Warrior, Plush and Tregal, in that order. Compana was superior in neck strength to all but Warrior. **TREGAL** proved satisfactory in height, straw strength and bushel weight. The excellent bushel weight and good grades produced by **TITAN**, together with satisfactory straw and neck strength, make the variety a good choice for this zone on the basis of 1945 results. **WARRIOR** showed good neck and straw strength, but had distinctly low bushel weight. Apart from its slight superiority in height, **PLUSH** gave only an average performance.

General Yield Performance During Past Six Years

COMPANA was used in 1944 when it ranked fifth out of six varieties and again in 1945 when it excelled. **TITAN** produced the third highest yield in 1944 and ranked second in 1945. **WARRIOR** was tested in 1942 when it was outyielded by all other varieties. In 1945 Warrior placed third. **PLUSH** has been tested in this zone during five of the past six years. In three of those years Plush was the high yielder. In 1943, however, it ranked third out of four varieties, and in 1945 it was fourth out of five. **TREGAL** was not used in Wheat Pool Tests previous to 1945.

TABLE No. 16.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONES 2B, 2E, and 2F.
(15 satisfactory tests)

	Plush	Warrior	Titan	Tregal	Compana
Yield in bushels per acre.....	28.9	28.3	32.2	29.3	29.4
Height in inches.....	23.4	21.6	22.2	21.6	18.2
Days from seeding to ripening.....	92.0	85.4	89.2	90.7	88.4
Straw strength.....	8.9	9.0	8.8	8.7	8.1
Neck strength.....	1.6	1.7	1.7	1.7	1.5
Bushel weight in lbs.....	44.0	38.6	46.4	44.9	45.5
Necessary grain yield difference—3.7 bushels.					
Commercial grades in percentage.					
3 C.W. yellow.....	52.9	—	—	—	—
1 feed.....	—	5.9	64.7	58.8	52.9
2 feed.....	17.6	41.2	11.8	11.8	11.8
3 feed.....	29.5	52.9	23.5	29.4	35.3

CEREAL VARIETY ZONES 2B, 2E AND 2F

The summarized results for Zones 2B, 2E and 2F are shown in Table No. 16. **TITAN** significantly outyielded Warrior, but no other yield differences were significant. Titan excelled in bushel weight, which, considered with its otherwise satisfactory performance, would indicate suitability for this area. **COMPANA** showed satisfactory yield, earliness and bushel weight, but was inferior in height. **TREGAL** was satisfactory, but showed no outstanding features. **PLUSH** excelled in height, produced satisfactory straw and neck strength, but was late maturing. Although **WARRIOR**

excelled in earliness and straw strength these advantages were offset by its inferior yield and poor bushel weight.

General Yield Performance During Past Six Years

TITAN was tested in 1944 when it produced the third highest yield out of six varieties. In 1945 this variety excelled. **COMPANA** ranked fourth in 1944 and second in 1945. **TREGAL** was not grown in Wheat Pool Tests before 1945. **PLUSH** was used during four of the past six years and outyielded all other varieties in every year except 1945, when it ranked fourth. On this basis Plush would appear to be a suitable variety for the area. **WARRIOR** has been used twice and was outyielded by all other varieties in both years.

TABLE No. 17.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 2D
(3 satisfactory tests)

	Plush	Warrior	Titan	Tregal	Compana
Yield in bushels per acre.....	23.0	27.2	26.2	27.7	24.6
*Height in inches.....	22.0	19.0	20.0	19.0	18.0
*Days from seeding to ripening.....	83.0	77.0	78.0	83.0	78.0
*Straw strength.....	9.0	10.0	9.0	9.0	7.2
*Neck strength.....	2.0	1.0	1.0	1.0	2.0
Bushel weight in lbs.....	42.3	39.7	43.3	44.0	45.7
Necessary grain yield difference—5.7 bushels.					
Commercial grades in percentage.					
3 C.W. yellow.....	33.3	—	—	—	—
1 feed.....	—	—	33.3	33.3	66.7
2 feed.....	—	—	—	—	—
3 feed.....	66.7	100.0	66.7	66.7	33.3

*Only one test result available.

CEREAL VARIETY ZONE 2D

The results for Zone 2D are shown in Table No. 17. It should be observed that some of the information for this zone is based on the results of only one test. **TREGAL** outyielded all other varieties, but not by the difference necessary for significance. **COMPANA** proved superior in bushel weight, satisfactory in earliness, but was relatively poor in straw and neck strength. **TITAN** showed average characteristics. **WARRIOR** ripened early, but was distinctly inferior in bushel weight. **PLUSH** was taller than any other variety, but low in yield.

General Yield Performance During Past Six Years

TREGAL was high yielder in 1945 but was not used previously in Wheat Pool Tests. **WARRIOR** was tested in 1942 and 1945, was outyielded by all other varieties in 1942, ranked second in 1945. **TITAN** was tested first in 1944, when it yielded fifth out of six varieties. In 1945 it ranked third. **COMPANA** yielded third out of six varieties in 1944, ranked fourth place in 1945. **PLUSH** has been tested during three years, outyielding all other varieties in 1942 and 1944. In 1945 it took last place. On the basis of this comparison Plush would appear to be the best choice for the zone.

TABLE No. 18.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3A
(3 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	44.9	37.2	41.4	32.6	40.4
Height in inches.....	28.0	28.0	29.2	31.2	30.7
Days from seeding to ripening.....	93.5	93.5	94.5	94.5	93.5
Straw strength.....	9.6	9.1	9.1	9.1	8.5
Neck strength.....	1.3	1.4	1.4	1.2	1.7
Bushel weight in lbs.....	48.7	43.0	50.7	48.7	49.5
Necessary grain yield difference—10.9 bushels.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	25.0	50.0
2 C.W. 6-row.....	—	—	—	50.0	25.0
3 C.W. 6-row.....	—	—	—	25.0	25.0
3 C.W. yellow.....	100.0	—	—	—	—
1 feed.....	—	25.0	100.0	—	—
2 feed.....	—	50.0	—	—	—
3 feed.....	—	25.0	—	—	—

CEREAL VARIETY ZONE 3A

Summarized results for Cereal Variety Zone 3A are shown in Table No. 18. **PLUSH** was high in yield but outyielded only O.A.C. 21 by more than the necessary difference. Other characteristics of Plush were favorable, indicating its suitability for use in this area. **TITAN** yielded well, excelled in bushel weight and exceeded Plush in height. For a feed barley Titan would appear highly satisfactory in the locality. **MONTCALM**, in the malting class, was shorter, slightly weaker in straw and neck than O.A.C. 21. However, Montcalm's superior yield and bushel weight gives it a preference over O.A.C. 21. Both varieties showed a definite susceptibility to loose smut infection. **WARRIOR** had low yield and bushel weight and graded poorly.

General Yield Performance During Past Six Years

PLUSH was tested during five of the past six years. Four times Plush has outyielded all other varieties and in 1943 it was only slightly outyielded by Newal, the first place variety for that year. The results indicate that Plush is highly satisfactory in this zone. **TITAN**, used during two years, ranked third out of six varieties in 1944 and yielded second in 1945. **MONTCALM** used for the first time in 1945 test. **WARRIOR** was outyielded by all other varieties in 1942. In 1945 it yielded in fourth place. O.A.C. 21 has been tested during four years and generally produced below average yields.

TABLE No. 19.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3B
(4 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	58.7	45.0	50.9	43.4	54.2
Height in inches.....	40.5	37.5	38.5	40.0	39.5
Days from seeding to ripening.....	94.5	85.0	88.5	95.0	97.0
Straw strength.....	7.1	9.5	7.1	4.8	4.3
Neck strength.....	2.0	1.0	1.5	2.5	2.4
Bushel weight in lbs.....	48.2	41.6	49.4	49.6	49.6
No significant grain yield difference between varieties.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	20.0	20.0
2 C.W. 6-row.....	—	—	—	80.0	60.0
3 C.W. 6-row.....	—	—	—	—	20.0
3 C.W. yellow.....	80.0	—	—	—	—
1 feed.....	20.0	—	100.0	—	—
2 feed.....	—	40.0	—	—	—
3 feed.....	—	60.0	—	—	—

CEREAL VARIETY ZONE 3B

Summarized results for Cereal Variety Zone 3B are shown in Table No. 19. The differences in yield between varieties were not significant. However, **PLUSH** again excelled in this respect with Montcalm a good second. Plush excelled in height and proved satisfactory as a feed variety for this area. **TITAN** produced average yield, good bushel weight, but proved somewhat inferior in length of straw to the Plush variety. However, Titan matured six days earlier than Plush, a factor of considerable importance in this area where early frosts are a serious threat. O.A.C. 21 was outyielded by Montcalm, but it matured two days earlier and was slightly taller. **MONTCALM** showed more susceptibility to smut, but in other characteristics proved equal to O.A.C. 21. Both varieties showed distinct weakness in neck and straw. **WARRIOR**, the hooded variety, excelled in straw and neck strength, proved considerably superior in earliness, but was low in yield, bushel weight, grades and height.

General Yield Performance During Past Six Years

PLUSH has been used in Wheat Pool Tests during five of the past six years. In three of the five years Plush has been high yielder and in the other two years Plush was second to Newal, the top place variety. On the basis of these results it is considered that Plush is highly satisfactory for use in this area. **MONTCALM** was tested for the first time in 1945. **TITAN** tested during two years. In 1944, this variety ranked third out of six, while in 1945 Titan was third out of five. **WARRIOR** was outyielded

by all other varieties in 1942, ranked fourth in 1945. O.A.C. 21 has been tested during four of the past six years and generally has produced average yields.

TABLE No. 20.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3C
(12 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	42.9	36.7	43.1	34.7	41.3
Height in inches.....	29.8	25.4	28.0	29.8	30.1
Days from seeding to ripening.....	91.7	82.1	86.5	88.7	89.9
Straw strength.....	8.8	7.5	8.9	7.3	8.0
Neck strength.....	1.5	1.5	1.5	2.2	1.8
Bushel weight in lbs.....	46.3	42.1	48.8	45.4	47.9
Necessary grain yield difference—3.4 bushels.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	—	23.1
2 C.W. 6-row.....	—	—	—	15.4	30.8
3 C.W. 6-row.....	—	—	—	38.5	30.8
3 C.W. yellow.....	61.5	—	—	—	—
1 feed.....	—	15.4	92.3	38.5	7.6
2 feed.....	38.5	38.5	—	—	—
3 feed.....	—	46.1	7.7	7.6	7.7

CEREAL VARIETY ZONE 3C

Summarized results for Zone 3C are shown in Table No. 20. **TITAN** outyielded all other varieties, but only in the cases of **Warrior** and O.A.C. 21 were the differences significant. Titan excelled in bushel weight and straw strength, with neck strength equalling that of **Plush** and **Warrior**. Titan ripened five days earlier than **PLUSH**, but four and one half days later than **Warrior**. Although two inches shorter than **Plush**, the generally excellent performance of the Titan variety indicates its suitability for this zone. **MONTCALM** significantly outyielded O.A.C. 21. Although O.A.C. 21 matured just over a day earlier and showed greater resistance to loose smut, the Montcalm variety showed superiority in every other respect, and on the basis of these results is the better malting variety for use in this zone. Once again the only commendable feature shown by **WARRIOR** is its earliness.

General Yield Performance During the Past Six Years

TITAN was used first for Wheat Pool Tests in 1944, when it yielded fourth out of six varieties. In 1945 Titan outyielded all other varieties. **PLUSH** has been used five times during the past six years. It has ranked first three times, second in 1945, and was outyielded by all other varieties in 1943. However, on the basis of these results, **Plush** has a good record and is highly satisfactory for use in the zone. **MONTCALM** tested for the first time in 1945. **WARRIOR** has been tested during two years, ranking last place in 1942 and second last in 1945. O.A.C. 21 has produced below average yields over the four years during which it has been tested.

TABLE No. 21.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONES 3D and 3F
(4 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	76.4	63.6	63.9	62.0	73.4
Height in inches.....	35.5	30.7	33.0	37.2	37.2
Days from seeding to ripening.....	88.5	81.0	86.7	88.7	91.0
Straw strength.....	7.0	8.0	8.2	5.1	6.4
Neck strength.....	1.6	1.0	1.2	2.3	2.3
Bushel weight in lbs.....	47.5	44.7	48.5	48.2	49.7
Necessary grain yield difference—7.3 bushels.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	25.0	25.0
2 C.W. 6-row.....	—	—	—	—	25.0
3 C.W. 6-row.....	—	—	—	50.0	25.0
3 C.W. yellow.....	50.0	—	—	—	—
1 feed.....	—	25.0	100.0	25.0	25.0
2 feed.....	50.0	75.0	—	—	—
3 feed.....	—	—	—	—	—

CEREAL VARIETY ZONES 3D AND 3F

Summarized results for Zones 3D and 3F are shown in Table No. 21. **PLUSH** significantly outyielded all varieties but Montcalm. Although it proved inferior to **TITAN** in bushel weight, straw and neck strength, and was two days later in ripening, its outstanding yield and excellent height would indicate that Plush is preferable in the feed barley class for use in this area. Plush showed a small amount of loose smut, while Titan was quite free of this disease. **MONTCALM** significantly outyielded **O.A.C. 21** and also exceeded the latter variety in bushel weight. Both malting varieties were weak in straw and neck. Montcalm was later than **O.A.C. 21** in maturing and showed somewhat more susceptibility to loose smut. However, the results would indicate that Montcalm in the malting barley class is preferable for use in this zone. **WARRIOR** was decidedly inferior in bushel weight and height. Its advantages were early maturity, good straw and neck strength.

General Yield Performance During Past Six Years

PLUSH has outyielded all other varieties during each of the five years that it has been used in Wheat Pool Tests in this area. This excellent record indicates that Plush is particularly suitable in the area. **MONTCALM** was not tested in this area before 1945. **TITAN** was tested in 1944 when it ranked second out of six varieties. In 1945 it was third out of five varieties. **WARRIOR** was the lowest in yield for 1942 and fourth out of five varieties for 1945. **O.A.C. 21** has generally shown below average yields during the four years it has been tested.

TABLE No. 22.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3E (East)
(5 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	62.0	52.9	53.9	51.4	54.9
Height in inches.....	34.5	28.7	31.0	37.0	36.2
Days from seeding to ripening.....	94.7	88.7	92.7	94.0	96.5
Straw strength.....	9.4	9.2	9.4	7.3	8.4
Neck strength.....	1.5	1.4	1.6	2.7	2.1
Bushel weight in lbs.....	47.4	41.4	48.2	46.4	48.8
No significant grain yield difference between varieties.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	—	—
2 C.W. 6-row.....	—	—	—	—	—
3 C.W. 6-row.....	—	—	—	40.0	60.0
3 C.W. yellow.....	40.0	—	—	—	—
1 feed.....	40.0	40.0	80.0	20.0	20.0
2 feed.....	20.0	—	20.0	40.0	20.0
3 feed.....	—	60.0	—	—	—

CEREAL VARIETY ZONE 3E (EAST)

Summarized results for Zone 3E (East) are shown in Table No. 22. Although there were no significant differences in yields it is interesting to note that **PLUSH** outyielded all other varieties by differences ranging from 7 to 10 bushels. Plush was two days later and slightly lighter in bushel weight than **TITAN**. Plush also showed a small amount of smut, while Titan was free of this disease. However, on the basis of these results Plush, with superior height and yield, is the better feed variety for this area. **MONTCALM** outyielded **O.A.C. 21** and showed somewhat superior bushel weight. It was stronger in straw and neck, but matured later, was slightly shorter and showed greater susceptibility to loose smut. Montcalm would appear to be the better malting variety for the zone, but the earlier ripening qualities of **O.A.C. 21** should not be overlooked in the choice of a variety. The decided inferiority of the hooded variety, **WARRIOR**, in height and bushel weight offsets its desirable early ripening characteristics.

General Yield Performance During Past Six Years

PLUSH has outyielded all other varieties in three of the five years that it has been tested. In 1943 Plush ranked third out of four varieties and in 1944, Plush yielded second out of six. Plush would appear, on the basis of these results, to be satisfactory for use in this area. **MONTCALM** was first

used in Wheat Pool Tests during 1945. **TITAN** ranked third out of six varieties in 1944 and third out of five in 1945. **WARRIOR** was used in 1942 and was outyielded by all other varieties. In 1945 it ranked second last. **O.A.C. 21**, the poorest yielder in 1945, has ranked slightly below average for the four years during which it has been tested.

TABLE No. 23.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3E (West)
(7 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	30.9	27.7	28.8	22.6	27.2
Height in inches.....	22.7	18.9	20.1	22.1	23.9
Days from seeding to ripening.....	97.1	90.3	94.3	95.6	98.8
Straw strength.....	8.6	8.5	9.3	8.3	8.7
Neck strength.....	1.7	1.5	1.5	2.1	1.7
Bushel weight in lbs.....	46.6	42.5	47.3	45.5	48.1
Necessary grain yield difference—4.5 bushels.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	—	—
2 C.W. 6-row.....	—	—	—	10.0	10.0
3 C.W. 6-row.....	—	—	—	10.0	20.0
3 C.W. yellow.....	30.0	—	—	—	—
1 feed.....	50.0	10.0	80.0	20.0	70.0
2 feed.....	20.0	40.0	20.0	50.0	—
3 feed.....	—	50.0	—	10.0	—

CEREAL VARIETY ZONE 3E (WEST)

Summarized results for Zone 3E (West) are shown in Table No. 23. **PLUSH** excelled in yield, but only in the case of O.A.C. 21 was the difference significant. Plush was somewhat taller than Titan, but was inferior in bushel weight and early ripening. Plush showed poorer neck and straw strength than Titan. Loose smut was in evidence on the Plush variety, while Titan was free of the disease. Covered smut, however, affected Titan slightly, while Plush was practically free from this infection. The results indicate that Plush and **TITAN** are equally suitable for use in the area. In the malting class **MONTCALM** was noticeably superior to O.A.C. 21 in all characteristics except early maturity. O.A.C. 21 ripened approximately three days before Montcalm. O.A.C. 21 contained a smaller percentage of smut than Montcalm, but showed inferiority to the latter variety in neck and straw strength. On the basis of the results this year Montcalm is somewhat superior in the malting class to O.A.C. 21. **WARRIOR** excelled in early ripening, but showed no other particularly favorable characteristics.

General Yield Performance During Past Six Years

PLUSH has outyielded all other varieties in three of five years that it has been tested. In 1943 Plush ranked third out of four varieties and in 1944 Plush yielded second out of six. Plush would appear, on the basis of these results, to be satisfactory for use in this area. **MONTCALM** was first used in Wheat Pool Tests during 1945. **TITAN** was third in yield during 1944 and second during 1945. **WARRIOR** was used in 1942 and was outyielded by all other varieties. In 1945 it ranked third. In the four years during which **O.A.C. 21** has been tested, this variety has generally yielded slightly below average.

TABLE No. 24.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONES 4A and 4B
(6 satisfactory tests)

	Plush	Warrior	Titan	O.A.C. 21	Montcalm
Yield in bushels per acre.....	62.2	49.6	57.8	57.2	58.0
Height in inches.....	33.2	28.2	32.2	32.2	31.0
Days from seeding to ripening.....	93.5	85.5	90.2	91.2	92.0
Straw strength.....	6.8	7.6	7.7	6.9	7.5
Neck strength.....	1.4	1.3	1.2	2.3	1.4
Bushel weight in lbs.....	47.0	44.1	48.1	47.5	49.4
Necessary grain yield difference—5.2 bushels.					
Commercial grades in percentage.					
1 C.W. 6-row.....	—	—	—	—	—
2 C.W. 6-row.....	—	—	—	25.0	25.0
3 C.W. 6-row.....	—	—	—	37.5	37.5
3 C.W. yellow.....	25.0	—	—	—	—
1 Feed.....	50.0	37.5	87.5	37.5	37.5
2 feed.....	25.0	37.5	12.5	—	—
3 feed.....	—	25.0	—	—	—

CEREAL VARIETY ZONES 4A AND 4B

The summarized results for Zones 4A and 4B are shown in Table No. 24. **PLUSH** excelled in yield, but only in the case of Warrior was the yield difference significant. Plush also excelled in height, was average in bushel weight and neck strength but had weak straw. Plush was later than any other variety in ripening, a factor of considerable importance in this northerly area. **TITAN** showed average bushel weight and yield. Its height, straw strength and neck strength were satisfactory and it ripened more than three days earlier than Plush. In the malting barley class, **MONTCALM** yielded slightly higher than O.A.C. 21. The difference in yield was not significant. Montcalm outweighed O.A.C. 21 by almost two pounds per bushel and showed considerably better straw and neck strength. In height and earliness **O.A.C. 21** had a slight advantage. O.A.C. 21 and Montcalm both showed considerable susceptibility to loose smut, but the infection on O.A.C. 21 was somewhat greater than that which appeared on Montcalm. **WARRIOR** was low in yield and bushel weight. It was exceeded in height by all other varieties but excelled in earliness.

General Yield Performance During Past Six Years

PLUSH has been tested in this area during five of the past six years. Plush excelled all other varieties in yield four times, but in the year 1943 it ranked third out of four. This excellent record would indicate the suitability of Plush for the area. **MONTCALM** has not been used in Wheat Pool Tests previous to 1945. **TITAN** was used in 1944 when it yielded second to Plush and again in 1945 when it placed third. **O.A.C. 21** has been used during four years and has given an average performance. **WARRIOR** yielded second last in the 1942 test, took last place in 1945.



The Barley Test supervised by John P. Baker, Red Deer Hill.

TABLE No. 25

Individual Summarized Results of all Tests—Barley

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Sub-Dist.	Test Dist.	design- nation Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per measured bushel	Com- mercial grades	Grading remarks
WILLIAM J. BOYES, CARNDUFF											
3A.....	1	1	B	Plush.....	40.4	32	—	10.0	1.0	49	3 C.W. yellow
				Warrior....	28.3	29	—	9.2	1.2	43	2 fd.
				Titan.....	37.0	32	—	9.2	2.5	51	1 fd.
				O.A.C.21..	37.1	35	—	10.0	1.2	49	2 C.W. 6-R
				Montcalm	47.8	34	—	9.2	1.7	50	1 C.W. 6-R.
Necessary difference—5.6 bushels.											

ELMER LAFRENTZ, BIENFAIT											
2A.....	1	4	B	Plush.....	49.1	—	—	—	—	49	1 fd.
				Warrior....	40.9	—	—	—	—	45	2 fd.
				Titan.....	45.1	—	—	—	—	51	1 fd.
				Tregal....	47.7	—	—	—	—	50	1 fd.
				Compans	50.6	—	—	—	—	48	1 fd.
Necessary difference—5.2 bushels.											

ROBERT L. GOUD, ESTEVAN											
2A.....	1	5	B	Plush.....	25.0	27	78	10.0	1.0	46	1 fd.
				Warrior....	26.9	24	74	9.5	1.0	38	3 fd.
				Titan.....	30.2	25	74	9.0	1.0	46	1 fd.
				Tregal....	26.1	23	78	10.0	1.7	47	1 fd.
				Compans	25.9	19	74	8.5	1.0	46	1 fd.
No significant grain yield difference between varieties.											

CLINTON L. PEDERSON, TORQUAY											
2A.....	1	6	B	Plush.....	22.6	21	—	—	—	46	3 C.W. yellow
				Warrior....	26.2	22	—	—	—	43	2 fd.
				Titan.....	21.9	22	—	—	—	48	1 fd.
				Tregal....	15.2	22	—	—	—	48	1 fd.
				Compans	32.5	18	—	—	—	47	1 fd.
Necessary difference—5.5 bushels.											

Tests Discarded on account of damage by drought, pests, hail or other causes.

3A.....	1	3	B	William Sparing, Auburton.
3A.....	1	10	B	James A. Murray, Carlyle.

WHEAT POOL DISTRICT 2

GLADYS V. DOBEN, BUFFALO GAP											
1A.....	2	3	C	Plush.....	24.4	22	87	9.0	1.0	45	2 fd.
				Warrior....	24.4	20	78	10.0	1.0	38	3 fd.
				Titan.....	29.7	22	81	9.0	2.0	46	1 fd.
				Tregal....	27.9	21	87	9.0	2.0	44	2 fd.
				Compans	21.9	19	81	5.0	2.7	45	2 fd.
No significant grain yield difference between varieties.											

JAY M. CHESNEY, STRATHALLEN											
1A.....	2	5	B	Plush.....	15.0	15	102	10.0	2.0	47	3 C.W. yellow
				Warrior....	17.1	14	102	10.0	2.0	45	2 fd.
				Titan.....	19.7	14	102	10.0	2.0	50	1 fd.
				Tregal....	19.7	16	102	10.0	2.0	50	1 fd.
				Compans	17.5	13	102	10.0	2.0	51	1 fd.
No significant grain yield difference between varieties.											

THOMAS OLLIVER, FIR MOUNTAIN											
1A.....	2	6	B	Plush.....	17.7	—	94	9.2	1.2	44	2 fd.
				Warrior....	22.1	—	90	8.7	2.7	39	3 fd.
				Titan.....	16.9	—	101	8.5	1.7	48	1 fd.
				Tregal....	14.8	—	95	8.7	2.2	47	1 fd.
				Compans	14.6	—	94	9.0	2.2	48	1 fd.
Necessary difference—2.2 bushels.											

Wheat Pool District 2—Continued

Cereal Variety Zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripen-ing	Straw strength	Neck strength	Pounds per measured bushel	Com-mercial grades	Grading remarks
GORDON E. BROEDER, MAXSTONE												
1A.....	2	7	B	Plush.....	25.4	24	100	9.0	2.0	49	3 C.W. yellow	
				Warrior.....	20.1	26	97	9.0	1.0	44	2 fd.	
				Titan.....	26.3	23	98	9.0	2.0	51	1 fd.	
				Tregal.....	22.7	23	99	10.0	2.0	51	1 fd.	
				Compana.....	26.3	20	99	9.0	2.0	50	1 fd.	

No significant grain yield difference between varieties.

EDGAR C. BUTTON, OGEMA												
1A.....	2	9	B	Plush.....	27.1	24	—	—	2.0	48	3 C.W. yellow	
				Warrior.....	30.2	18	—	—	1.0	43	2 fd.	
				Titan.....	36.5	20	—	—	2.0	48	1 fd.	
				Tregal.....	28.9	20	—	—	2.0	49	1 fd.	
				Compana.....	35.4	24	—	—	2.0	49	1 fd.	

No significant grain yield difference between varieties.

Tests Discarded on account of damage by drought, pests, hail or other causes.

1A.....	2	1	B	Daniel A. Dembiczak, Lake Alma.								
1A.....	2	8	B	Miss Lind G. Dahlman, Readlyn.								
2A.....	2	10	B	Miss Arvilla M. Spence, Trossachs.								

WHEAT POOL DISTRICT 3

HAROLD N. WILSON, McCORD												
1A.....	3	1	B	Plush.....	13.2	14	—	10.0	1.0	38	3 fd.	
				Warrior.....	32.4	13	—	10.0	1.0	37	3 fd.	
				Titan.....	23.8	14	—	10.0	1.0	43	2 fd.	
				Tregal.....	21.5	14	—	10.0	1.0	39	3 fd.	
				Compana.....	19.2	15	—	10.0	1.0	41	3 fd.	

Necessary difference—3.2 bushels.

WILFRED F. ELLIS, RELIANCE												
1A.....	3	2	B	Plush.....	7.9	16	93	9.3	2.0	44	2 fd.	
				Warrior.....	19.9	16	84	10.0	1.0	41	3 fd.	
				Titan.....	20.4	17	84	8.7	2.0	49	1 fd.	
				Tregal.....	10.9	16	91	9.0	1.7	48	1 fd.	
				Compana.....	16.7	16	86	6.5	2.0	45	2 fd.	

Necessary difference—3.2 bushels.

CHARLES J. FLETCHER, RAVENSCRAG												
1A.....	3	6	C	Plush.....	14.4	24	102	9.0	3.0	40	3 fd.	
				Warrior.....	19.6	24	93	10.0	3.0	34	3 fd.	
				Titan.....	16.7	20	96	7.0	2.0	42	3 fd.	
				Tregal.....	13.4	20	96	7.0	2.0	38	3 fd.	
				Compana.....	9.8	14	97	5.0	1.0	42	3 fd.	

Necessary difference—3.3 bushels.

DONALD E. NEELY, CARNAGH												
2C.....	3	6	D	Plush.....	24.5	30	91	8.0	2.0	50	3 C.W. yellow	
				Warrior.....	29.5	28	86	10.0	1.0	48	1 fd.	
				Titan.....	27.2	29	88	9.0	2.0	52	1 fd.	
				Tregal.....	30.0	30	89	9.0	2.0	51	1 fd.	
				Compana.....	31.2	24	89	10.0	1.0	51	1 fd.	S.G.

Necessary difference—2.2 bushels.

JAMES W. WEIR, CARNAGH												
2C.....	3	6	E	Plush.....	25.5	18	97	10.0	1.0	48	3 C.W. yellow	
				Warrior.....	24.0	16	87	10.0	1.0	45	2 fd.	
				Titan.....	23.6	18	90	10.0	1.0	50	1 fd.	
				Tregal.....	20.1	17	98	10.0	1.0	49	1 fd.	
				Compana.....	20.2	16	88	9.0	2.0	51	1 fd.	

Necessary difference—2.3 bushels.

EVERETT R. KING, BEAVER VALLEY												
1A.....	3	9	B	Plush.....	5.9	16	100	8.2	1.2	39	3 fd.	
				Warrior.....	30.1	16	100	9.2	1.2	35	3 fd.	
				Titan.....	18.3	16	100	7.5	1.2	44	2 fd.	
				Tregal.....	8.2	16	100	7.2	1.2	43	2 fd.	
				Compana.....	25.9	16	100	7.7	1.0	41	3 fd.	

Necessary difference—4.6 bushels.

Tests Discarded on account of damage by drought, pests, hail, or other causes.

1A.....	3	4	B	Donald Moe, Frontier.								
1A.....	3	5	B	Orlan H. Rye, Robsart.								
1A.....	3	7	B	Francis G. Cooke, Eastend.								

WHEAT POOL DISTRICT 4

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
WILFRED A. SANDAU, MAPLE CREEK												
1B.....	4	2	B	Plush.....	4.0	12	—	9.5	1.7	39	3 fd.	
				Warrior....	13.4	13	—	10.0	1.0	34	3 fd.	
				Titan.....	9.3	14	—	9.7	1.0	41	3 fd.	
				Tregal.....	9.2	12	—	9.7	1.5	40	3 fd.	
				Compana	9.9	10	—	8.7	2.0	40	3 fd.	
Necessary difference—3.0 bushels.												

MELVIN MUTSCHLER, FOX VALLEY												
1B.....	4	7	B	Plush.....	4.8	21	91	9.5	1.0	39	3 fd.	
				Warrior....	4.6	17	86	10.0	1.0	36	3 fd.	
				Titan.....	7.6	20	89	10.0	1.0	46	1 fd.	
				Tregal.....	7.1	23	89	10.0	1.5	39	3 fd.	
				Compana	5.6	16	83	8.2	1.5	40	3 fd.	

No significant grain yield difference between varieties.

HENRY P. SEPT, LEADER												
1B.....	4	8	B	Plush.....	8.9	16	88	6.0	2.0	43	2 fd.	
				Warrior....	11.5	14	88	5.5	2.0	42	3 fd.	
				Titan.....	9.8	13	88	4.7	1.0	49	1 fd.	
				Tregal.....	7.5	12	88	4.5	1.0	44	2 fd.	
				Compana	—	10	88	4.7	1.0	47	1 fd.	

Samples incomplete.

Tests Discarded on account of damage by drought, pests, hail or other causes.

1A.....	4	9	B	Ruth L. Fyke, Sceptre.								
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WHEAT POOL DISTRICT 5

VERNON W. OEHLERKING, GRAVELBOURG												
1A.....	5	2	B	Plush.....	11.4	—	—	—	—	46	3 C.W. yellow	
				Warrior....	14.2	—	—	—	—	44	2 fd.	
				Titan.....	16.6	—	—	—	—	50	1 fd.	
				Tregal.....	12.9	—	—	—	—	49	1 fd.	
				Compana	9.9	—	—	—	—	45	2 fd.	

No significant grain yield difference between varieties.

ARTHUR ARNOLD, SHAMROCK												
1A.....	5	5	B	Plush.....	40.2	29	94	7.7	3.0	45	2 fd.	
				Warrior....	35.7	25	89	6.5	1.3	43	2 fd.	
				Titan.....	36.2	26	89	9.5	2.0	49	1 fd.	
				Tregal.....	31.8	25	93	9.0	1.7	47	1 fd.	
				Compana	39.4	23	92	8.0	1.5	46	1 fd.	

No significant grain yield difference between varieties.

ARTHUR E. DE LA HEY												
2E.....	5	8	B	Plush.....	54.6	27	100	9.0	1.0	49	3 C.W. yellow	S.G.
				Warrior....	45.1	25	90	8.2	1.5	43	2 fd.	
				Titan.....	52.6	24	97	9.2	1.5	51	1 fd.	
				Tregal.....	51.2	25	100	9.0	1.0	47	1 fd.	
				Compana	44.2	21	95	9.0	1.0	49	1 fd.	

Necessary difference—5.7 bushels.

WALTER J. SANDERS, UREN												
1A.....	5	9	B	Plush.....	13.4	28	90	9.0	1.5	44	2 fd.	
				Warrior....	10.0	30	87	9.5	1.2	41	3 fd.	
				Titan.....	12.9	29	91	9.0	1.2	47	1 fd.	
				Tregal.....	10.8	31	91	8.7	1.7	46	1 fd.	
				Compana	14.3	29	90	8.7	2.2	49	1 fd.	

Necessary difference—1.7 bushels.

Tests Discarded on account of damage by drought, pests, hail or other causes.

1A.....	5	10	B	Henry Unger, Ernfold.								
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WHEAT POOL DISTRICT 6

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripen-ing	Straw strength	Neck strength	Pounds per meas-ured bushel	Com-mercial grades	Grading remarks
LAWRENCE FUNKE, CLAYBANK												
1A.....	6	4	B	Plush.....	23.1	17	89	7.2	2.0	39	3 fd.	
				Warrior.....	15.2	14	87	8.2	1.2	36	3 fd.	
				Titan.....	17.5	18	87	8.0	1.5	44	2 fd.	
				Tregal.....	10.7	16	89	7.5	2.0	40	3 fd.	
				Compana	11.0	15	94	7.5	1.7	43	2 fd.	
Necessary difference—6.7 bushels.												

BENJAMIN F. SMITH, BOHARM												
2E.....	6	5	B	Plush.....	39.7	29	94	8.0	2.0	46	3 C.W. yellow	
				Warrior.....	33.3	25	86	9.0	2.0	43	2 fd.	
				Titan.....	40.6	27	91	8.0	1.7	50	1 fd.	
				Tregal.....	43.4	24	91	8.0	2.0	47	1 fd.	
				Compana	36.0	19	92	10.0	1.0	49	1 fd.	
No significant grain yield difference between varieties.												

VERNON C. FOWKE, DRINKWATER												
2E.....	6	6	B	Plush.....	21.5	20	93	9.0	2.7	46	3 C.W. yellow	
				Warrior.....	17.9	17	83	9.7	1.0	45	2 fd.	
				Titan.....	16.9	15	88	8.7	1.7	47	1 fd.	
				Tregal.....	20.0	18	90	10.0	2.5	47	1 fd.	
				Compana	22.9	16	86	8.7	1.0	50	1 fd.	
No significant grain yield difference between varieties.												

ROLAND J. GROFF, LEBRET												
3C.....	6	8	B	Plush.....	44.2	20	84	10.0	1.0	48	3 C.W. yellow S.I.	
				Warrior.....	38.3	20	77	9.0	1.0	44	2 fd.	
				Titan.....	41.3	21	81	10.0	2.0	52	1 fd.	
				O.A.C. 21	33.6	21	81	8.0	2.0	49	2 C.W. 6-R	
				Montcalm	45.1	23	84	10.0	1.0	50	1 C.W. 6-R	
No significant grain yield difference between varieties.												

OLIVE E. THOMPSON, DISLEY												
2B.....	6	10	B	Plush.....	17.7	23	—	9.5	1.7	39	3 fd.	
				Warrior.....	30.0	24	78	9.3	1.2	33	3 fd.	
				Titan.....	23.1	24	82	10.0	1.3	42	3 fd.	
				Tregal.....	22.5	22	—	9.0	1.3	37	3 fd.	
				Compana	19.0	20	78	9.5	1.0	41	3 fd.	
Necessary difference—3.2 bushels.												

Tests Discarded on account of damage by drought, pests, hail or other causes.

2E.....	6	7	B	Myron A. Burns, R.R. 1, Regina.								
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WHEAT POOL DISTRICT 7

EARL L. GRIFFIN, MOOSOMIN												
3B.....	7	2	B	Plush.....	52.3	—	—	—	—	48	3 C.W. yellow	
				Warrior.....	32.7	—	—	—	—	38	3 fd.	
				Titan.....	43.2	—	—	—	—	47	1 fd.	
				O.A.C. 21	36.7	—	—	—	—	49	2 C.W. 6-R	
				Montcalm	47.4	—	—	—	—	49	2 C.W. 6-R	
Necessary difference—9.3 bushels.												

LAURENCE E. KORFMAN, KIPLING												
3A.....	7	4	B	Plush.....	57.2	31	—	9.2	1.0	47	3 C.W. yellow	
				Warrior.....	48.4	29	—	8.2	2.0	44	2 fd.	
				Titan.....	55.7	31	—	8.7	1.0	50	1 fd.	
				O.A.C. 21	29.5	30	—	9.2	1.0	47	3 C.W. 6-R	
				Montcalm	43.3	32	—	7.7	1.0	48	3 C.W. 6-R	S.G.
Necessary difference—7.9 bushels.												

RENA D. NIXON, FILLMORE												
2A.....	7	5	B	Plush.....	52.3	32	—	8.7	2.2	48	3 C.W. yellow	
				Warrior.....	57.8	30	—	8.7	1.5	46	1 fd.	
				Titan.....	65.1	32	—	8.2	2.0	51	1 fd.	
				Tregal.....	54.8	32	—	9.2	2.0	44	2 fd.	
				Compana	56.5	24	—	8.0	1.5	45	2 fd.	
No significant grain yield difference between varieties.												

Wheat Pool District 7—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	nation	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks	
ARNOLD L. BIEBER, MONTMARTRE												
3A.....	7	6	B	Plush.....	37.1	30	83	—	1.2	49	3 C.W. yellow	S.G.
				Warrior.....	34.8	37	82	—	1.5	46	1 fd.	
				Titan.....	31.4	35	82	—	1.0	52	1 fd.	
				O.A.C. 21	31.1	37	82	—	1.2	49	2 C.W. 6-R	
				Montcalm	30.1	36	83	—	1.7	50	2 C.W. 6-R	W.S.
No significant grain yield difference between varieties.												
PHYLLIS M. HOWARTH, BROADVIEW												
3A.....	7	7	B	Plush.....	19.5	19	104	9.7	2.2	50	3 C.W. yellow	
				Warrior.....	12.2	17	105	10.0	1.0	39	3 fd.	
				Titan.....	21.5	19	107	9.5	1.2	50	1 fd.	
				O.A.C. 21	18.5	23	107	8.2	1.5	50	1 C.W. 6-R	
				Montcalm	19.0	21	104	8.7	2.5	50	1 C.W. 6-R	
Damaged by deer. Yields not used in analysis.												
DOUGLAS C. WINDRIM, ROCANVILLE												
3C.....	7	8	B	Plush.....	52.9	—	—	—	—	47	3 C.W. yellow	
				Warrior.....	45.4	—	—	—	—	40	3 fd.	
				Titan.....	41.9	—	—	—	—	49	1 fd.	
				O.A.C. 21	45.1	—	—	—	—	46	3 C.W. 6-R	
				Montcalm	50.7	—	—	—	—	49	2 C.W. 6-R	
Samples bulked.												
GEORGE E. SCHENTAG, YARBO												
3C.....	7	9	B	Plush.....	63.6	—	—	—	—	51	3 C.W. yellow	
				Warrior.....	36.4	—	—	—	—	45	2 fd.	
				Titan.....	61.0	—	—	—	—	53	1 fd.	
				O.A.C. 21	51.4	—	—	—	—	49	2 C.W. 6-R	
				Montcalm	54.7	—	—	—	—	51	1 C.W. 6-R	
Necessary difference—4.4 bushels.												
LEROY WENDELL, NEUDORF												
3C.....	7	11	B	Plush.....	36.8	34	86	7.2	0.7	45	2 fd.	
				Warrior.....	35.1	28	79	2.0	2.0	40	3 fd.	
				Titan.....	46.0	33	82	8.7	0.5	52	1 fd.	
				O.A.C. 21	38.5	35	83	6.5	1.2	47	3 C.W. 6-R	
				Montcalm	37.5	35	82	2.0	1.2	46	1 fd.	G
Necessary difference—5.0 bushels.												
Tests discarded on account of damage by drought, pests, hail or other causes.												
3A.....	7	3	B	James R. and John H. Dovell, Langbank.								

WHEAT POOL DISTRICT 8

LEONARD ADAMS, MacNUTT												
3B.....	8	1	B	Plush.....	53.4	—	—	—	—	47	1 fd.	W.S.
				Warrior.....	—	—	—	—	—	41	3 fd.	
				Titan.....	38.8	—	—	—	—	48	1 fd.	Pl., W.S.
				O.A.C. 21	54.1	—	—	—	—	49	2 C.W. 6-R	W.S.
				Montcalm	45.6	—	—	—	—	49	3 C.W. 6-R	St.
Samples incomplete.												
GEORGE C. SCHAPPERT, SALTCOATS												
3B.....	8	1	C	Plush.....	63.6	42	94	9.0	2.0	49	3 C.W. yellow	S E
				Warrior.....	43.8	39	81	10.0	1.0	39	3 fd.	S.E.
				Titan.....	51.2	40	86	6.0	2.0	51	1 fd.	
				O.A.C. 21	39.7	42	94	6.2	2.0	50	1 C.W. 6-R	
				Montcalm	43.7	42	93	6.2	2.2	50	1 C.W. 6-R	S.E.
No significant grain yield difference between varieties.												
JOHN SAGAN, McKIM												
3C.....	8	3	B	Plush.....	44.4	—	—	—	—	45	2 fd.	
				Warrior.....	36.8	—	—	—	—	43	2 fd.	
				Titan.....	37.0	—	—	—	—	47	1 fd.	Dcl.
				O.A.C. 21	37.6	—	—	—	—	44	2 fd.	
				Montcalm	47.5	—	—	—	—	47	3 C.W. 6-R	
No significant grain yield difference between varieties.												

Wheat Pool District 8—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	desig- Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per measured bushel	Com- mercial grades	Grading remarks
ARTHUR EFFA, YORKTON											
3C.....	8	4	B	Plush.....	47.5	39	96	7.0	1.0	44	2 fd.
				Warrior.....	33.9	25	86	10.0	1.0	44	2 fd.
				Titan.....	48.5	38	91	7.0	2.0	47	1 fd.
				O.A.C. 21	41.3	36	92	8.0	2.0	45	2 fd.
				Montcalm	49.4	34	94	8.7	2.0	46	3 C.W. 6-R
Necessary difference—5.2 bushels.											

CARLYLE L. THORSON, HINCHCLIFFE											
3B.....	8	8	B	Plush.....	70.7	—	—	—	—	48	3 C.W. yellow
				Warrior.....	58.4	—	—	—	—	45	2 fd.
				Titan.....	58.0	—	—	—	—	49	1 fd.
				O.A.C. 21	62.9	—	—	—	—	49	2 C.W. 6-R
				Montcalm	77.2	—	—	—	—	51	2 C.W. 6-R
Necessary difference—4.8 bushels.											
											W.S., M.
											St., S.B.P.

JOHN W. KOROLUK, HYAS											
4A.....	8	9	B	Plush.....	79.1	42	84	1.7	1.2	44	2 fd.
				Warrior.....	74.2	38	78	2.5	1.7	42	3 fd.
				Titan.....	84.3	41	81	3.7	1.2	48	1 fd.
				O.A.C. 21	80.7	44	85	3.0	1.7	46	3 C.W. 6-R
				Montcalm	74.6	42	84	3.7	1.2	48	3 C.W. 6-R
No significant grain yield difference between varieties.											
											W.S.
											S.I.

BORIS J. STRILCHUK, ARRAN											
3B.....	8	10	B	Plush.....	48.3	39	95	5.2	2.0	49	3 C.W. yellow
				Warrior.....	45.0	36	89	9.0	1.0	45	2 fd.
				Titan.....	51.2	37	91	8.2	1.0	52	1 fd.
				O.A.C. 21	34.3	38	96	3.5	3.0	51	2 C.W. 6-R
				Montcalm	48.8	37	101	2.5	2.7	49	2 C.W. 6-R
Necessary difference—6.7 bushels.											
											W.S., S.Pl., S.E.
											W.S.

Tests discarded on account of damage by drought, pests, hail or other causes.

3B.....	8	2	B	Kathleen Gleason, Tonkin.							
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WHEAT POOL DISTRICT 9

CHARLES P. DEMOREST, SOUTHEY											
3C.....	9	2	B	Plush.....	52.0	32	81	8.3	2.0	49	3 C.W. yellow
				Warrior.....	44.6	28	75	8.2	1.5	46	1 fd.
				Titan.....	45.7	29	80	9.0	1.0	50	1 fd.
				O.A.C. 21	31.2	30	79	5.7	3.0	44	2 fd.
				Montcalm	46.9	34	80	7.5	2.0	46	3 C.W. 6-R
Necessary difference—7.6 bushels.											

ERNEST ORBAN, PUNNICHY											
3C.....	9	3	B	Plush.....	37.0	24	—	—	2.0	46	3 C.W. yellow
				Warrior.....	42.7	24	—	—	1.0	46	1 fd.
				Titan.....	40.9	22	—	—	1.0	49	1 fd.
				O.A.C. 21	31.3	23	—	—	3.0	47	3 C.W. 6-R
				Montcalm	31.5	24	—	—	2.0	48	2 C.W. 6-R
Necessary difference—3.7 bushels.											
											W.S.

ERNEST M. SCHERLIE, EARL GREY											
3C.....	9	4	B	Plush.....	31.2	26	92	10.0	3.0	48	3 C.W. yellow
				Warrior.....	27.7	24	78	10.0	3.0	45	2 fd.
				Titan.....	29.9	23	85	9.7	2.7	51	1 fd.
				O.A.C. 21	19.6	28	88	9.5	2.5	47	3 C.W. 6-R
				Montcalm	29.0	27	92	10.0	2.7	51	1 C.W. 6-R
Necessary difference—4.5 bushels.											

PHILIP DABROWSKI, GOVAN											
2B.....	9	5	B	Plush.....	31.6	—	—	—	—	43	2 fd.
				Warrior.....	33.3	—	—	—	—	37	3 fd.
				Titan.....	48.6	—	—	—	—	46	1 fd.
				Tregal.....	26.9	—	—	—	—	43	2 fd.
				Compna	42.7	—	—	—	—	43	2 fd.
Necessary difference—4.4 bushels.											

Wheat Pool District 9—Continued

Cereal Variety Zone	Sub- Dist.	Test desig- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
FREDERICK G. WALKER, GOVAN											
2B.....	9	5	C	Plush.....	24.8	—	—	—	46	3 C.W. yellow	S.G.
				Warrior....	62.8	—	—	—	44	2 fd.	
				Titan.....	61.7	—	—	—	50	1 fd.	
				Tregal.....	61.9	—	—	—	49	1 fd.	
				Compana	51.8	—	—	—	49	1 fd.	
Samples bulked.											

THOMAS R. STRATTON, IMPERIAL												
2B.....	9	6	B	Plush.....	28.9	—	—	—	2.0	39	3 fd.	
				Warrior....	31.1	—	—	—	2.0	38	3 fd.	
				Titan.....	34.0	—	—	—	2.0	43	2 fd.	
				Tregal.....	29.8	—	—	—	2.0	43	2 fd.	
				Compana	32.8	—	—	—	2.0	42	3 fd.	
No significant grain yield difference between varieties.												

GAVIN F. HAMILTON, SEMANS												
2B.....	9	7	B	Plush.....	6.9	15	88	9.7	2.0	43	2 fd.	
				Warrior....	12.8	16	79	9.3	3.0	31	3 fd.	
				Titan.....	11.6	16	88	9.3	2.5	43	2 fd.	
				Tregal.....	8.0	16	88	9.7	2.5	42	3 fd.	
				Compana	10.2	14	88	9.5	2.5	41	3 fd.	
Necessary difference—2.4 bushels.												

WENDELL ALLEN, WYNOT												
3C.....	9	9	B	Plush.....	47.7	27	96	9.0	1.0	43	2 fd.	
				Warrior....	48.9	24	78	9.0	1.0	42	3 fd.	
				Titan.....	50.2	25	82	7.5	2.0	46	1 fd.	
				O.A.C. 21	43.4	27	90	7.2	2.0	45	2 fd.	
				Montcalm	42.5	29	87	8.5	2.0	49	2 C.W. 6-R	
No significant grain yield difference between varieties.												

J. MARVIN NICKLIN, MOZART												
3C.....	9	10	B	Plush.....	47.9	32	103	10.0	1.0	47	3 C.W. yellow	S.I.
				Warrior....	34.5	28	97	9.0	2.0	41	3 fd.	
				Titan.....	50.6	32	103	10.0	1.0	51	1 fd.	
				O.A.C. 21	41.1	32	103	10.0	1.0	47	3 C.W. 6-R	
				Montcalm	50.8	32	103	10.0	1.0	50	2 C.W. 6-R	
Necessary difference—6.7 bushels.												

Tests discarded on account of damage by drought, pests, hail or other causes.

3C.....	9	1	B	Vladimir Leontowicz, Jasmin.								
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WHEAT POOL DISTRICT 10

JAMES O. HUNTER, RIVERHURST												
1A.....	10	2	B	Plush.....	29.4	23	89	10.0	1.0	47	3 C.W. yellow	
				Warrior....	28.5	18	89	10.0	1.0	43	2 fd.	
				Titan.....	33.4	16	89	10.0	1.0	49	1 fd.	
				Tregal.....	29.4	18	89	10.0	1.0	49	1 fd.	
				Compana	27.0	19	89	10.0	1.0	51	1 fd.	
No significant grain yield difference between varieties.												

GARDINER FACCA, WISETON												
1A.....	10	4	B	Plush.....	22.3	—	—	—	—	43	2 fd.	
				Warrior.....	36.9	—	—	—	—	38	3 fd.	
				Titan.....	43.6	—	—	—	—	47	1 fd.	
				Tregal.....	33.7	—	—	—	—	46	1 fd.	
				Compana	30.8	—	—	—	—	45	2 fd.	
Necessary difference—8.4 bushels.												

ROY LESYK, BIRSAY												
1A.....	10	5	B	Plush.....	7.3	16	92	9.5	1.7	43	2 fd.	
				Warrior....	10.8	17	90	9.0	1.5	40	3 fd.	
				Titan.....	9.8	19	90	8.7	1.7	43	2 fd.	
				Tregal.....	8.8	19	92	8.5	1.3	40	3 fd.	
				Compana	11.8	17	93	8.7	1.5	48	1 fd.	
No significant grain yield difference between varieties.												

Wheat Pool District 10—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
JUHL JACOBSON, BRODERICK												
2B.....	10	6	B	Plush.....	11.1	—	—	—	—	37	3 fd.	
				Warrior.....	20.3	—	—	—	—	27	3 fd.	
				Titan.....	20.8	—	—	—	—	37	3 fd.	
				Tregal.....	16.9	—	—	—	—	39	3 fd.	
				Compana.....	19.0	—	—	—	—	36	3 fd.	
Necessary difference—3.5 bushels.												
DONALD REID, RENOWN												
2B.....	10	8	B	Plush.....	—	33	—	9.0	2.0	—	—	
				Warrior.....	—	26	—	10.0	1.0	—	—	
				Titan.....	—	31	—	10.0	1.0	—	—	
				Tregal.....	—	28	—	10.0	2.0	—	—	
				Compana.....	—	24	—	10.0	1.0	—	—	
Destroyed by rats. No samples received.												

LORNE M. McCREARY, BLADWORTH												
2B.....	10	9	B	Plush.....	46.7	28	89	9.0	1.2	48	3 C.W. yellow	
				Warrior.....	23.7	23	83	7.5	2.0	44	2 fd.	
				Titan.....	35.9	27	82	9.0	1.5	51	1 fd.	
				Tregal.....	46.5	25	84	8.7	2.0	51	1 fd.	
				Compana.....	30.5	21	78	4.0	2.2	51	1 fd.	
Necessary difference—9.1 bushels.												

Tests discarded on account of damage by drought, pests, hail or other causes.

1A.....	10	3	B	Melvin J. Affeck, Demaine.								
2B.....	10	10	B	William T. Miller, Laura.								

WHEAT POOL DISTRICT 11

ROSS D. and LORNE A. CAMPBELL, ELROSE												
2F.....	11	2	D	Plush.....	16.3	18	98	8.3	1.7	45	2 fd.	
				Warrior.....	17.2	18	91	8.0	1.3	43	2 fd.	
				Titan.....	18.4	18	95	7.3	1.3	50	1 fd.	
				Tregal.....	15.5	16	97	8.7	1.5	47	1 fd.	
				Compana.....	15.0	14	92	8.5	1.0	48	1 fd.	
No significant grain yield difference between varieties.												
JAMES WALKER, RICHLEA												
2F.....	11	3	C	Plush.....	28.9	—	—	—	—	49	3 C.W. yellow	S.G.
				Warrior.....	20.8	—	—	—	—	46	1 fd.	
				Titan.....	30.6	—	—	—	—	52	1 fd.	S.G.
				Tregal.....	28.3	—	—	—	—	51	1 fd.	
				Compana.....	26.0	—	—	—	—	50	1 fd.	
No significant grain yield difference between varieties.												

ALLEN W. FOLLENSBEE, GLIDDEN												
1A.....	11	3	F	Plush.....	10.6	20	89	8.7	2.0	42	3 fd.	
				Warrior.....	15.5	19	86	10.0	1.0	38	3 fd.	
				Titan.....	19.8	18	86	9.0	2.0	43	2 fd.	
				Tregal.....	14.0	20	88	8.7	2.0	43	2 fd.	
				Compana.....	10.8	18	85	8.3	3.0	43	2 fd.	
Necessary difference—4.7 bushels.												

ALLAN E. FRANCIS, MANTARIO												
1B.....	11	4	B	Plush.....	12.5	—	—	—	—	44	2 fd.	
				Warrior.....	34.1	—	—	—	—	41	3 fd.	
				Titan.....	40.2	—	—	—	—	49	1 fd.	
				Tregal.....	16.6	—	—	—	—	49	1 fd.	
				Compana.....	34.0	—	—	—	—	46	1 fd.	
Damaged by gophers. Yields not used in analysis.												

ERNEST R. KANASEWICH, EATONIA												
1B.....	11	4	C	Plush.....	2.8	19	91	9.0	3.0	39	3 fd.	
				Warrior.....	4.1	19	90	9.0	1.0	35	3 fd.	
				Titan.....	6.5	21	91	9.0	1.7	39	3 fd.	
				Tregal.....	4.5	20	92	9.0	2.2	38	3 fd.	
				Compana.....	7.3	18	91	7.7	2.0	40	3 fd.	
No significant grain yield difference between varieties.												

Wheat Pool District 11—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
THOMAS R. BUTTAR, ZEALANDIA												
2B.....	11	7	B	Plush.....	6.5	11	—	10.0	1.0	38	3 fd.	
				Warrior.....	31.7	14	—	10.0	2.0	31	3 fd.	
				Titan.....	29.7	12	—	9.0	3.0	40	3 fd.	
				Tregal.....	14.8	12	—	8.0	1.0	38	3 fd.	
				Compana.....	35.1	13	—	7.0	3.0	40	3 fd.	
Necessary difference—5.2 bushels.												
ARTHUR G. MADIN, PLENTY												
2F.....	11	9	B	Plush.....	32.8	20	90	8.0	1.5	48	3 C.W. yellow	
				Warrior.....	19.0	16	91	8.7	1.2	43	2 fd.	
				Titan.....	27.9	19	91	7.7	1.5	51	1 fd.	
				Tregal.....	22.7	19	90	7.2	1.5	48	1 fd.	
				Compana.....	23.8	15	90	6.2	1.2	48	1 fd.	
Necessary difference—7.2 bushels.												
Tests discarded on account of damage by drought, pests, hail or other causes.												
1A.....	11	1	C	Ellwood Miller, White Bear.								
2F.....	11	8	B	Graham H. Walker, Stranraer.								
1B.....	11	10	C	Howard E. Hawkins, Hoosier.								

WHEAT POOL DISTRICT 12

WALTER KEMBEL, LUSELAND												
2D.....	12	4	B	Plush.....	22.9	—	—	—	—	48	3 C.W. yellow	
				Warrior.....	17.8	—	—	—	—	43	2 fd.	
				Titan.....	26.2	—	—	—	—	49	1 fd.	
				Tregal.....	25.9	—	—	—	—	49	1 fd.	
				Compana.....	23.9	—	—	—	—	48	1 fd.	
Necessary difference—3.8 bushels.												
VICTOR J. STANG, PRIMATE												
2D.....	12	6	B	Plush.....	30.5	—	—	—	—	38	3 fd.	
				Warrior.....	36.4	—	—	—	—	39	3 fd.	
				Titan.....	30.5	—	—	—	—	42	3 fd.	
				Tregal.....	32.7	—	—	—	—	41	3 fd.	
				Compana.....	26.9	—	—	—	—	47	1 fd.	
Necessary difference—4.5 bushels.												
ANNE D. DE GROOTE, WINTER												
2D.....	12	7	B	Plush.....	15.5	22	83	9.0	2.0	41	3 fd.	
				Warrior.....	27.3	19	77	10.0	1.0	37	3 fd.	
				Titan.....	21.9	20	78	9.0	1.0	39	3 fd.	
				Tregal.....	24.6	19	83	9.0	1.0	42	3 fd.	
				Compana.....	23.0	18	78	7.2	2.0	42	3 fd.	
Necessary difference—3.0 bushels.												
DONALD GRAHAM, MARSDEN												
3E.....	12	8	B	Plush.....	32.5	—	—	—	—	48	1 fd.	W., Pl.
				Warrior.....	36.9	—	—	—	—	41	3 fd.	
				Titan.....	27.2	—	—	—	—	47	1 fd.	W., Pl.
				O.A.C. 21.....	32.9	—	—	—	—	42	3 fd.	
				Montcalm.....	37.3	—	—	—	—	48	1 fd.	B.Pl, W.
Samples bulked.												
Tests discarded on account of damage by drought, pests, hail or other causes.												
3E.....	12	10	B	George C. Howlett, Battleford.								

WHEAT POOL DISTRICT 13

JOSEPH H. A. EARIS, Jr., BAY TRAIL												
3C.....	13	1	B	Plush.....	34.7	34	96	8.7	2.0	44	2 fd.	
				Warrior.....	33.3	28	87	2.7	1.0	36	3 fd.	
				Titan.....	35.1	29	88	9.5	1.0	41	3 fd.	
				O.A.C. 21.....	24.1	36	94	3.2	3.0	38	3 fd.	
				Montcalm.....	31.7	33	97	7.7	2.5	41	3 fd.	
Necessary difference—5.3 bushels.												

Wheat Pool District 13—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation Varieties	Yield per acre	Plant height in inches	Days seed-ing to ripen-ing	Straw strength	Neck strength	Pounds per meas-ured bushel	Com-mercial grades	Grading remarks
A. FLOREEN V. EISWERTH, YOUNG											
2B.....	13	2	B	Plush.....	31.6	30	83	10.0	1.0	47	3 C.W. yellow
				Warrior.....	26.7	28	80	10.0	1.0	38	3 fd.
				Titan.....	28.5	28	83	10.0	1.2	46	1 fd.
				Tregal.....	30.8	28	86	10.0	1.2	46	1 fd.
				Compana	12.6	24	87	10.0	1.2	45	2 fd.
Samples incomplete.											

ALLAN DANIELSON, MEACHAM											
2B.....	13	4	C	Plush.....	72.1	32	93	7.5	1.5	48	3 C.W. yellow
				Warrior.....	64.5	29	86	9.5	1.0	41	3 fd.
				Titan.....	68.6	31	88	9.0	1.0	50	1 fd.
				Tregal.....	72.3	29	90	8.0	1.5	49	1 fd.
				Compana	63.8	23	89	6.5	1.0	50	1 fd.
Necessary difference—5.2 bushels.											

ELIZABETH TURCHENEK, ST. DENIS											
2B.....	13	8	B	Plush.....	17.9	28	—	—	—	37	3 fd.
				Warrior.....	24.7	25	—	—	—	30	3 fd.
				Titan.....	23.2	25	—	—	—	40	3 fd.
				Tregal.....	20.8	25	—	—	—	39	3 fd.
				Compana	19.7	20	—	—	—	42	3 fd.
No significant grain yield difference between varieties.											

Tests discarded on account of damage by drought, pests, hail or other causes.

2B.....	13	3	B	Aldon E. Andreen, Dundurn.							
3D.....	13	9	B	Joseph Suwinski, Wakaw.							

WHEAT POOL DISTRICT 14

MELVIN D. STROM, CLAIR											
3C.....	14	2	B	Plush.....	27.5	—	—	—	—	46	3 C.W. yellow
				Warrior.....	28.6	—	—	—	—	36	3 fd.
				Titan.....	31.1	—	—	—	—	47	1 fd.
				O.A.C. 21	23.9	—	—	—	—	43	2 fd.
				Montcalm	29.6	—	—	—	—	46	3 C.W. 6-R
No significant grain yield difference between varieties.											

ERLING V. PEDERSON, DAHLTON											
4A.....	14	4	A	Plush.....	65.0	25	—	8.2	2.0	47	1 fd. Dcl.
				Warrior.....	51.1	22	—	9.2	1.0	45	2 fd. B. Dcl.
				Titan.....	56.1	25	—	8.7	1.0	47	1 fd. B. Dcl.
				O.A.C. 21	59.4	24	—	8.2	3.0	47	1 fd. Dcl. S.E.
				Montcalm	61.7	25	—	8.0	1.0	49	3 C.W. 6-R
No significant grain yield difference between varieties.											

WILLIAM H. SCHWEITZER, ALGROVE											
4A.....	14	4	B	Plush.....	74.4	35	99	6.3	2.0	49	1 fd. W.S., B.P.
				Warrior.....	67.6	33	92	7.5	1.0	46	1 fd. W.S., B.P.
				Titan.....	83.5	35	98	7.0	2.0	52	1 fd. W.S.
				O.A.C. 21	82.1	39	97	6.5	2.0	52	2 C.W. 6-R W.S.
				Montcalm	72.6	36	101	7.7	2.0	52	1 fd. Pl. W.S.
Necessary difference—8.5 bushels.											

ROBERT WM. EVANS, LIGHTWOODS											
4A.....	14	4	C	Plush.....	47.1	34	93	9.0	1.0	50	3 C.W. yellow
				Warrior.....	42.2	30	85	10.0	1.0	47	1 fd. W.S.
				Titan.....	40.0	32	87	10.0	1.0	50	1 fd. W.S.
				O.A.C. 21	40.5	30	91	8.0	3.0	49	2 C.W. 6-R W.S.
				Montcalm	44.8	30	90	9.0	2.0	50	2 C.W. 6-R W.S.
No significant grain yield difference between varieties.											

MORRISON S. MORLEY, KINLOCH											
4A.....	14	5	B	Plush.....	—	—	—	—	—	47	3 C.W. yellow W.S.
				Warrior.....	—	—	—	—	—	45	2 fd. W.S.
				Titan.....	—	—	—	—	—	48	1 fd. Dcl., Pl.
				O.A.C. 21	—	—	—	—	—	46	1 fd. Dcl., Pl.
				Montcalm	—	—	—	—	—	48	1 fd.
Yields discarded. Badly shattered.											

Wheat Pool District 14—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
CECIL J. GOUGH, WEEKES												
3F.....	14	6	B	Plush.....	77.8	41	93	8.2	1.0	44	2 fd.	
				Warrior....	78.0	36	88	9.5	1.0	43	2 fd.	
				Titan.....	68.6	35	91	10.0	1.0	48	1 fd.	W.S.
				O.A.C. 21	65.5	44	94	5.7	2.1	48	3 C.W. 6-R	W.S.
				Montcalm	76.5	43	95	6.0	1.5	50	3 C.W. 6-R	W.S.

No significant grain yield difference between varieties.

JOHN P. HLUCHANIUK, GOLBURN												
3F.....	14	7	B	Plush.....	63.2	32	100	8.0	2.0	50	3 C.W. yellow	
				Warrior....	40.3	29	84	7.5	1.0	45	2 fd.	
				Titan.....	49.2	31	100	7.7	2.0	50	1 fd.	Dcl.
				O.A.C. 21	42.6	31	99	5.0	1.2	49	3 C.W. 6-R	S. Pl., W.S.
				Montcalm	57.9	33	105	9.0	3.0	51	2 C.W. 6-R	W.S.

Necessary difference—4.7 bushels.

GUNNAR H. PEDERSEN, STAR CITY												
3D.....	14	8	B	Plush.....	81.1	34	79	8.2	1.5	51	3 C.W. yellow	
				Warrior....	70.4	30	76	9.5	1.0	48	1 fd.	S.E.
				Titan.....	77.1	32	78	9.7	1.0	50	1 fd.	
				O.A.C. 21	66.4	35	80	7.0	3.0	50	1 C.W. 6-R	
				Montcalm	74.3	31	81	8.0	2.5	52	1 C.W. 6-R	

Necessary difference—6.1 bushels.

JAMES S. CLAPSON, RIDGEDALE												
4A.....	14	9	B	Plush.....	61.2	—	—	—	—	46	1 fd.	F.
				Warrior....	33.4	—	—	—	—	37	3 fd.	
				Titan.....	43.8	—	—	—	—	44	2 fd.	Dcl.
				O.A.C. 21	50.0	—	—	—	—	46	1 fd.	F.
				Montcalm	54.8	—	—	—	—	46	1 fd.	F.

Necessary difference—11.4 bushels.

MARGUERITE STRAD, JORDAN RIVER												
3F.....	14	10	B	Plush.....	83.4	35	82	3.5	2.0	45	Tf. 2 fd.	
				Warrior....	65.6	28	76	5.7	1.0	43	Tf. 2 fd.	
				Titan.....	60.7	34	78	5.5	1.0	46	Tf. 1 fd.	W.S.
				O.A.C. 21	73.6	39	82	2.7	3.0	46	Tf. 1 fd.	W.S.
				Montcalm	84.8	42	83	2.7	2.2	46	Tf. 1 fd.	W.S.

Necessary difference—6.9 bushels.

Tests discarded on account of damage by drought, pests, hail or other causes.

3B.....	14	1	B	Russell O. Geck, Kelvington.								
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WHEAT POOL DISTRICT 15

JOHN P. BAKER, RED DEER HILL												
3E.....	15	3	B	Plush.....	82.0	37	100	10.0	1.5	47	3 C.W. yellow	
				Warrior....	70.9	36	93	9.5	1.3	37	3 fd.	
				Titan.....	73.3	37	99	9.2	2.0	49	1 fd.	W.S.
				O.A.C. 21	67.1	38	101	8.3	3.0	45	2 fd.	
				Montcalm	65.6	36	105	9.0	2.2	49	3 C.W. 6-R	W.S.

No significant grain yield difference between varieties.

LEON J. KLAASSEN, LAIRD												
3E.....	15	4	B	Plush.....	38.0	24	95	9.2	2.0	45	2 fd.	
				Warrior....	34.8	21	88	9.0	1.0	42	3 fd.	
				Titan.....	34.8	23	90	9.5	1.0	48	1 fd.	Dcl.
				O.A.C. 21	28.5	22	96	8.0	2.0	47	1 fd.	Dcl.
				Montcalm	36.4	25	100	10.0	2.0	49	1 fd.	Dcl.

Necessary difference—2.8 bushels.

JOHN O. DAVIES, KILWINNING												
3E.....	15	5	B	Plush.....	53.5	37	80	—	—	53	1 fd.	Dcl.
				Warrior....	55.5	32	72	—	—	46	1 fd.	
				Titan.....	42.0	34	75	—	—	50	1 fd.	Dcl.
				O.A.C. 21	58.4	42	78	—	—	51	3 C.W. 6-R	W.S.
				Montcalm	50.9	42	79	—	—	53	3 C.W. 6-R	W.S.

Necessary difference—4.9 bushels.

Wheat Pool District 15—Continued

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
BENNIE MOLINE, CANWOOD												
3E.....	15	7	B	Plush.....	40.5	36	102	9.2	1.0	46	1 fd.	Dcl.
				Warrior.....	34.2	23	95	9.2	1.0	39	3 fd.	
				Titan.....	36.2	26	99	10.0	1.0	45	2 fd.	
				O.A.C. 21	20.6	39	100	4.5	3.0	43	2 fd.	
				Montcalm	38.3	37	105	7.2	2.0	45	2 fd.	
Necessary difference—5.3 bushels.												
J. MAURICE CYR, DEBDEN												
4B.....	15	7	C	Plush.....	46.6	—	—	—	—	45	2 fd.	
				Warrior.....	29.4	—	—	—	—	45	2 fd.	
				Titan.....	39.2	—	—	—	—	48	1 fd.	B. Dcl.
				O.A.C. 21	30.4	—	—	—	—	46	3 C.W. 6-R	
				Montcalm	39.9	—	—	—	—	50	2 C.W. 6-R	W.S.
Necessary difference—9.3 bushels.												
LEONARD ENGELHARDT, SHELLBROOK												
3E.....	15	8	B	Plush.....	53.9	28	97	9.0	2.0	46	3 C.W. yellow	
				Warrior.....	39.1	24	95	9.0	2.0	46	1 fd.	
				Titan.....	48.1	27	98	9.0	2.0	49	1 fd.	Dcl.
				O.A.C. 21	46.2	29	97	9.0	2.0	47	3 C.W. 6-R	
				Montcalm	50.9	30	97	9.0	2.0	49	3 C.W. 6-R	Dcl.
Necessary difference—6.5 bushels.												
WILLIAM FOWLER, PRINCE ALBERT												
3E.....	15	9	B	Plush.....	80.3	—	—	—	—	45	2 fd.	
				Warrior.....	64.8	—	—	—	—	39	3 fd.	
				Titan.....	69.7	—	—	—	—	48	1 fd.	Dcl.
				O.A.C. 21	64.5	—	—	—	—	46	1 fd.	Dcl.
				Montcalm	68.6	—	—	—	—	48	1 fd.	Dcl. F.
No significant grain yield difference between varieties.												

Tests discarded on account of damage by drought, pests, hail or other causes.

3E.....	15	2	B	Orest Strohan, Domremy.
3E.....	15	4	C	Jonathan L. Friesen, Rosthern.
4B.....	15	6	B	Douglas L. Good, Shell Lake.
4B.....	15	10	C	Joseph Pender, Janow Corner.
4A.....	15	11	B	Arnold C. Scott, Garrick.
4B.....	15	11	C	Donald S. McGonigle, Garrick.

WHEAT POOL DISTRICT 16

WILFRED C. GELINAS, FIELDING

3E.....	16	1	B	Plush.....	21.0	19	119	8.0	2.0	47	1 fd.	Dcl., G.
				Warrior.....	17.1	18	94	7.0	2.0	44	2 fd.	
				Titan.....	25.0	19	114	9.0	3.0	50	1 fd.	W.S.
				O.A.C. 21	11.6	15	104	9.0	2.0	47	1 fd.	Dcl., Pl.
				Montcalm	16.4	21	119	10.0	1.0	48	1 fd.	G., Pl.
Necessary difference—6.2 bushels.												

WILLIAM E. SCHMIDT, RUDELL

3E.....	16	1	C	Plush.....	18.6	16	—	8.5	—	44	2 fd.	
				Warrior.....	13.4	15	—	8.2	—	39	3 fd.	
				Titan.....	14.6	15	—	8.0	—	45	2 fd.	
				O.A.C. 21	—	14	—	6.2	—	*	*	
				Montcalm	8.7	14	—	6.5	—	46	3 C.W. 6-R	
Samples incomplete. *Not enough for weight.												

EARL W. CURRY, MAYMONT

3E.....	16	1	D	Plush.....	23.5	—	—	—	—	43	2 fd.	
				Warrior.....	16.7	—	—	—	—	37	3 fd.	
				Titan.....	24.8	—	—	—	—	46	1 fd.	
				O.A.C. 21	6.9	—	—	—	—	45	2 fd.	
				Montcalm	18.4	—	—	—	—	47	3 C.W. 6-R	
Necessary difference—3.5 bushels.												

Wheat Pool District 16—Continued

Cereal Variety Zone	Dist.	Sub-Dist.	Test design- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Neck strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
JACK HAGERTY, DENHOLM												
3E.....	16	3	B	Plush.....	36.8	34	89	8.2	2.2	48	3 C.W. yellow	
				Warrior....	24.8	28	90	6.7	2.7	44	2 fd.	
				Titan.....	35.9	29	91	9.5	1.0	49	1 fd.	W.
				O.A.C. 21	28.2	35	91	8.0	2.5	48	2 C.W. 6-R	
				Montcalm	37.7	36	90	8.0	2.0	49	2 C.W. 6-R	
No significant grain yield difference between varieties.												
DOUGLAS J. FRASER, PAYNTON												
3E.....	16	5	B	Plush.....	49.7	33	106	7.7	2.0	46	1 fd.	G.
				Warrior....	59.9	25	104	8.5	1.2	41	3 fd.	
				Titan.....	42.7	29	105	9.0	2.0	44	2 fd.	
				O.A.C. 21	44.4	31	105	8.5	3.0	45	2 fd.	
				Montcalm	39.1	32	105	8.2	2.5	46	1 fd.	G.
Necessary difference—9.5 bushels.												
WALLACE RICHARDSON, LASHBURN												
3E.....	16	6	B	Plush.....	73.7	—	—	—	—	48	1 fd.	Pl. M.
				Warrior....	49.4	—	—	—	—	47	1 fd.	
				Titan.....	60.0	—	—	—	—	48	1 fd.	Pl., St.
				O.A.C. 21	22.3	—	—	—	—	44	2 fd.	B. Pl.
				Montcalm	29.6	—	—	—	—	50	1 fd.	Pl., W.S.
Damaged by hail. Yields not used in analysis.												
DONALD L. INGRAM, CLEEVES												
4B.....	16	8	B	Plush.....	41.7	30	98	9.0	1.0	48	1 fd.	Dcl.
				Warrior....	33.8	18	87	9.0	2.0	46	1 fd.	
				Titan.....	42.3	28	95	9.0	1.0	48	1 fd.	Dcl.
				O.A.C. 21	33.5	24	92	9.0	2.0	48	3 C.W. 6-R	Dcl.
				Montcalm	41.5	22	93	9.0	1.0	52	3 C.W. 6-R	Dcl.
Samples bulked.												
JOHN E. THACKER, CLEEVES												
3E.....	16	8	D	Plush.....	26.1	18	91	10.0	1.0	48	1 fd.	W.S.
				Warrior....	17.4	11	83	10.0	1.0	45	2 fd.	
				Titan.....	18.5	13	83	10.0	1.0	47	1 fd.	St., M.
				O.A.C. 21	20.0	19	95	9.7	2.0	48	3 C.W. 6-R	W.S.
				Montcalm	23.5	22	96	9.2	1.7	50	1 fd.	W.S.
Necessary difference—2.9 bushels.												
VALMONT B. ARSENAULT, MEDSTEAD												
3E.....	16	9	B	Plush.....	21.5	21	83	—	—	47	3 C.W. yellow	
				Warrior....	23.0	19	83	—	—	40	3 fd.	
				Titan.....	20.4	18	83	—	—	45	2 fd.	
				O.A.C. 21	18.5	20	83	—	—	45	2 fd.	
				Montcalm	18.9	20	83	—	—	47	3 C.W. 6-R	
No significant grain yield difference between varieties.												
BERNHARD J. TOEWS, MAYFAIR												
3E.....	16	10	D	Plush.....	16.1	17	112	9.0	1.0	46	3 C.W. yellow	
				Warrior....	16.2	14	95	10.0	1.0	44	2 fd.	
				Titan.....	16.9	15	100	10.0	1.0	49	1 fd.	Dcl.
				O.A.C. 21	8.5	21	118	9.0	1.0	44	2 fd.	
				Montcalm	9.9	21	—	9.2	1.0	47	1 fd.	Dcl. Pl.
Damaged by early snow. Yields not used in analysis.												
Tests discarded on account of damage by drought, pests, hail or other causes.												
3E.....	16	8	C	Joe Willy, Cleaves.								
4B.....	16	10	C	Lloyd E. Delisle, Mildred.								
4B.....	16	11	C	Harry Konotopski, Rapid View.								

OAT TESTS

DESCRIPTION OF VARIETIES

VICTORY originated by the Swedish Plant Breeding Station at Svalof and introduced to Canada many years ago. It is a late, plump seeded variety which yields well where rust is not a factor. Victory is moderately susceptible to rusts and smuts.

VANGUARD originated at the Dominion Rust Research Laboratory in Winnipeg from the cross Hajira × Banner. Vanguard is a white seeded variety resistant to stem rust and susceptible to smut.

AJAX originated at the Dominion Rust Research Laboratory from the cross Victory × Hajira. It has a white seed, is fairly early and is resistant to stem rust, with moderate resistance to leaf rust and smut.

EXETER originated at the Dominion Rust Research Laboratory from the cross Victory × Rusota. It yields well in the cooler, moister areas of Saskatchewan, is late maturing and produces large kernels. Exeter is resistant to stem rust, but moderately susceptible to leaf rust and smut.

TABLE No. 26.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 2A

	Victory	Vanguard	Ajax	Exeter
Yield in bushels per acre.....	57.4	47.7	57.6	59.7
Height in inches.....	31.5	30.7	31.7	30.0
Days from seeding to ripening.....	88.7	90.5	88.5	92.2
Straw strength.....	9.0	8.8	8.8	8.5
Bushel weight in lbs.....	39.6	38.0	39.8	39.6
No significant grain yield difference between varieties.				
Commercial grades in percentage:				
1 C.W.....	60.0	40.0	60.0	40.0
2 C.W.....	40.0	40.0	40.0	40.0
3 C.W.....	—	20.0	—	20.0

CEREAL VARIETY ZONE 2A

The results for Cereal Variety Zone 2A are shown in Table No. 26. There were no significant grain yield differences between varieties, however, **EXETER** produced the highest yield. Exeter equalled Victory in bushel weight, but was slightly exceeded by Ajax. Exeter proved inferior in height and later in maturity to all other varieties. **AJAX** excelled in height, bushel weight and early ripening. With satisfactory yield and straw strength it would appear that Ajax, on the basis of these results, is most suitable for the zone. **VICTORY** practically equalled Ajax in yield, height, early ripening and bushel weight. Victory excelled in straw strength, but its susceptibility to rust indicates unsuitability to an area where rust is often prevalent. **VANGUARD** was low in yield, satisfactory in height, earliness and straw strength. It proved inferior to all other varieties in bushel weight.

General Yield Performance During Past Six Years

EXETER has been grown in Wheat Pool Tests in Zone 2A during two of the past six years. In both years Exeter exceeded all other varieties in yield. **AJAX** has been used twice. In 1942 this variety yielded third out of seven varieties and in 1945 it placed second. **VICTORY** has been tested four times since 1940 and has been the lowest yielder in one year. In the other three years it proved slightly below average. **VANGUARD** has been tested four times and has given an average performance.

CEREAL VARIETY ZONE 3A

The results of Cereal Variety Zone 3A are shown in Table No. 27. There were no significant grain yield differences between varieties in this zone. **AJAX**, however, was the highest yielder and reached maturity more quickly than any other variety. In bushel weight, Ajax practically equalled Victory, the first place variety. Ajax showed satisfactory strength of straw and

TABLE No. 27.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONE 3A

	Victory	Vanguard	Ajax	Exeter
Yield in bushels per acre.....	59.5	52.4	62.6	57.4
Height in inches	35.0	36.0	35.5	36.0
Days from seeding to ripening.....	93.7	95.7	93.0	97.0
Straw strength.....	9.3	7.7	8.3	8.7
Bushel weight in lbs.....	36.7	34.6	36.4	34.5
No significant grain yield difference between varieties.				
Commercial grades in percentage:				
1 C.W.....	29.0	14.0	29.0	14.0
2 C.W.....	—	14.0	—	14.0
Extra 3 C.W.....	14.0	—	14.0	—
3 C.W.....	14.0	14.0	—	14.0
1 feed.....	29.0	14.0	14.0	14.0
2 feed.....	14.0	44.0	43.0	30.0
3 feed.....	—	—	—	14.0

height and would appear to be suitable for use in this area. **VICTORY** excelled in bushel weight and straw strength and proved satisfactory in other characteristics. **EXETER** was third in yield, equal to Vanguard in height, but was low in bushel weight. Exeter required a longer time to ripen than any other variety. **VANGUARD** was low in yield and straw strength and had relatively low bushel weight. It equalled Exeter and exceeded all other varieties in height, but required more than average time for maturity.

General Yield Performance During Past Six Years

AJAX has been used during two years for Wheat Pool Tests in Zone 3A. In 1942 this variety yielded second out of seven varieties. In 1945 it was high yielder. **VICTORY** has been used in tests during four years and has given an average performance. **EXETER** was tested in this zone in 1942 and outyielded all other varieties. In 1945 it ranked third out of four. **VANGUARD** has been tested during four years with slightly below average results.

TABLE No. 28.—SUMMARIZED RESULTS FOR CEREAL VARIETY ZONES 3B and 3C

	Victory	Vanguard	Ajax	Exeter
Yield in bushels per acre.....	64.2	66.8	64.7	71.4
Height in inches	37.7	38.1	39.7	37.1
Days from seeding to ripening.....	87.6	89.6	87.0	90.6
Straw strength.....	7.7	7.9	8.4	8.5
Bushel weight in lbs.....	38.5	37.0	37.5	36.5
Necessary grain yield difference—6.3 bushels.				
Commercial grades in percentage:				
1 C.W.....	25.0	—	25.0	—
2 C.W.....	25.0	50.0	25.0	50.0
Extra 3 C.W.....	25.0	—	—	—
3 C.W.....	25.0	50.0	50.0	25.0
Extra 1 feed.....	—	—	—	—
1 feed.....	—	—	—	—
2 feed.....	—	—	—	25.0
3 feed.....	—	—	—	—

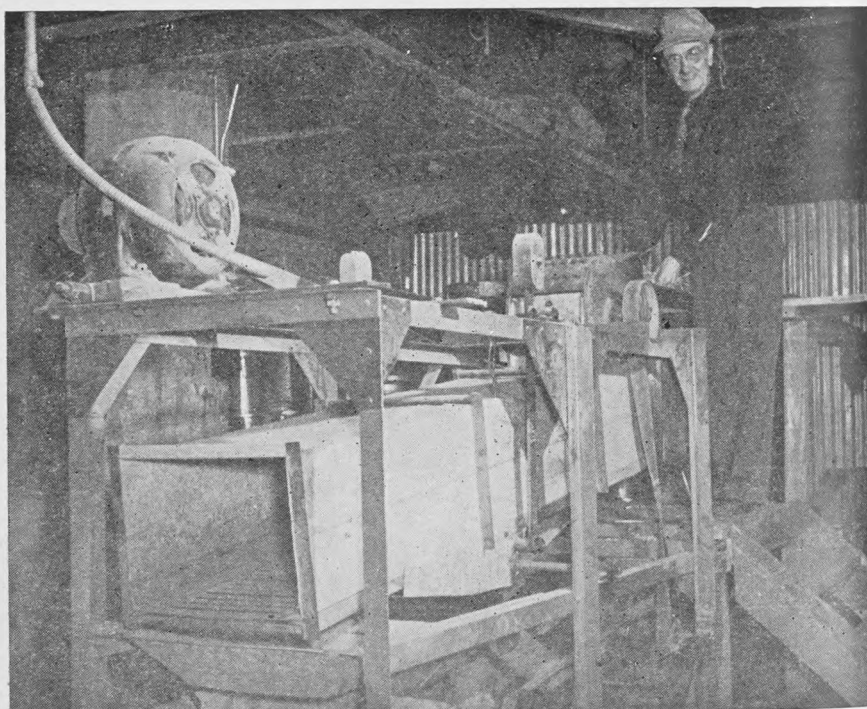
CEREAL VARIETY ZONES 3B AND 3C

EXETER produced the highest yield, exceeding Ajax and Victory by more than the necessary difference. Exeter had stronger straw than any other variety, but was slightly inferior in height. Exeter was lighter in weight per measured bushel and required a longer time to reach maturity than the other varieties, however, the excellent yield of this variety is worthy of consideration. **VANGUARD** ranked second in yield and otherwise showed average characteristics. **AJAX** excelled in height and earliness and practically equalled Exeter in straw strength. Ajax produced average bushel weight and was third in yield. **VICTORY** was low in yield and straw strength, but excelled in bushel weight. Victory required only slightly longer than Ajax to reach maturity.

General Yield Performance During Past Six Years

EXETER was tested in this zone in 1942 and 1945, outyielding all other varieties each year. **VANGUARD** has been tested during four years, giving a fairly average performance each year. **AJAX**, in 1942, yielded second out of seven varieties, in 1945 it ranked third out of four. **VICTORY** has been tested during four years and has produced approximately average yields.

THE THRESHER USED TO THRESH SHEAVES FROM TESTS



Sheaves from Variety Tests being threshed at Head Office of the Saskatchewan Wheat Pool.

TABLE No. 29

Individual Summarized Results of all Tests—Oats

WHEAT POOL DISTRICT 1

Cereal Variety Zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripen-ing	Straw strength	Pounds per meas-ured bushel	Com-mercial grades	Grading remarks
JAMES G. McPHERSON, GAINSBOROUGH											
3A.....	1	1	C	Victory.....	48.4	—	—	—	34	Tf. 1 fd.	
				Vanguard.....	47.0	—	—	—	32	Tf. 2 fd.	
				Ajax.....	47.0	—	—	—	33	Tf. 2 fd.	
				Exeter.....	43.4	—	—	—	34	Tf. 1 fd.	
No significant grain yield difference between varieties.											
WILFRID A. BLEROT, STORTHOAKS											
3A.....	1	2	C	Victory.....	45.1	—	—	—	35	1 fd.	St.
				Vanguard.....	40.7	—	—	—	36	1 fd.	St.
				Ajax.....	56.8	—	—	—	37	1 fd.	St.
				Exeter.....	39.3	—	—	—	36	1 fd.	St.
Necessary difference—9.9 bushels.											
JOSEPH P. DUNBAR, ROCHE PERCEE											
2A.....	1	4	C	Victory.....	51.1	28	89	10.0	39	1 C.W.	
				Vanguard.....	52.7	26	90	9.4	37	2 C.W.	
				Ajax.....	54.2	29	90	9.2	40	1 C.W.	
				Exeter.....	59.1	26	89	9.4	38	2 C.W.	S. St.
Necessary difference—2.3 bushels.											
JOHN E. SELLSTED, BENSON											
2A.....	1	5	C	Victory.....	45.6	35	91	9.0	42	1 C.W.	
				Vanguard.....	41.9	36	94	9.0	40	1 C.W.	
				Ajax.....	47.7	36	91	9.0	41	1 C.W.	
				Exeter.....	44.1	34	98	9.0	41	1 C.W.	
No significant grain yield difference between varieties.											
ARNOLD E. OLMSTEAD, MIDALE											
2A.....	1	6	C	Victory.....	80.2	27	84	9.8	37	2 C.W.	S.I.
				Vanguard.....	80.7	25	86	8.4	35	3 C.W.	
				Ajax.....	80.2	27	84	9.4	38	2 C.W.	S.I.
				Exeter.....	85.8	26	87	8.0	37	3 C.W.	G.
No significant grain yield difference between varieties.											
GORDON W. GUSTAFSON, GOODWATER											
2A.....	1	7	C	Victory.....	62.2	36	91	7.4	41	1 C.W.	
				Vanguard.....	58.8	36	92	8.4	40	1 C.W.	
				Ajax.....	63.6	35	89	7.8	41	1 C.W.	
				Exeter.....	67.2	34	95	7.6	41	1 C.W.	
Necessary difference—2.9 bushels.											
ALBERT L. LEVESQUE, FORGET											
2A.....	1	9	C	Victory.....	47.9	—	—	—	39	1 C.W.	
				Vanguard.....	44.3	—	—	—	38	1 C.W.	
				Ajax.....	42.1	—	—	—	39	1 C.W.	
				Exeter.....	42.1	—	—	—	41	1 C.W.	
No significant grain yield difference between varieties.											
AUDREY E. STENT, CARLYLE											
3A.....	1	10	C	Victory.....	40.0	—	—	—	33	2 fd.	
				Vanguard.....	28.7	—	—	—	29	2 fd.	
				Ajax.....	37.4	—	—	—	32	2 fd.	
				Exeter.....	25.5	—	—	—	27	3 fd.	
Necessary difference—6.0 bushels.											

WHEAT POOL DISTRICT 7

Cereal Variety Zone	Sub-Dist.	Test Dist.	Designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripen- ing	Straw strength	Pounds per meas- ured bushel	Com- mercial grades	Grading remarks
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GRANT BATEMAN, RED JACKET

3A.....	7	2	C	Victory.....	62.2	—	—	—	41	Ex. 3 C.W.	S.I.
				Vanguard	75.6	—	—	—	37	3 C.W.	G.
				Ajax.....	63.6	—	—	—	40	Ex. 3 C.W.	S.I.
				Exeter.....	50.9	—	—	—	36	3 C.W.	G.

Samples bulked.

DONALD W. DEBENHAM, KENNEDY

3A.....	7	3	C	Victory.....	74.7	—	98	10.0	40	1 C.W.	
				Vanguard	62.7	—	98	9.0	37	2 C.W.	
				Ajax.....	79.7	—	98	10.0	40	1 C.W.	
				Exeter.....	83.3	—	98	10.0	39	2 C.W.	G.

No significant grain yield difference between varieties.

WALTER L. SZCZEPONSKI, HANDSWORTH

3A.....	7	5	C	Victory.....	80.7	38	99	—	40	1 C.W.	
				Vanguard	72.0	39	104	—	38	1 C.W.	
				Ajax.....	83.1	37	98	—	40	1 C.W.	
				Exeter.....	81.7	40	106	—	40	1 C.W.	

Necessary difference—5.5 bushels.

HENRY C. HOOD, WOLSELEY

3A.....	7	7	C	Victory.....	68.1	32	84	10.0	34	3 C.W.	
				Vanguard	63.6	33	85	10.0	33	2 fd.	
				Ajax.....	71.6	34	83	10.0	33	2 fd.	
				Exeter.....	71.5	32	87	10.0	32	2 fd.	

No significant grain yield difference between varieties.

JOYCE A. DAVIES, WHITEWOOD

3C.....	7	8	C	Victory.....	95.9	43	84	8.6	37	1 C.W.	
				Vanguard	84.5	44	84	9.0	37	2 C.W.	
				Ajax.....	92.0	44	84	9.4	40	1 C.W.	
				Exeter.....	84.8	43	84	9.0	37	2 C.W.	

No significant grain yield difference between varieties.

GEORGINA A. M. HELLUVELL, SPY HILL

3B.....	7	9	A	Victory.....	62.1	—	—	—	36	3 C.W.	S.G.
				Vanguard	62.6	—	—	—	37	3 C.W.	S.G.
				Ajax.....	63.6	—	—	—	34	3 C.W.	
				Exeter.....	64.8	—	—	—	33	2 fd.	

No significant grain yield difference between varieties.

STANLEY J. ORSAK, GERALD

3B.....	7	9	C	Victory.....	39.0	30	82	5.6	37	2 C.W.	
				Vanguard	45.1	31	87	6.4	36	2 C.W.	
				Ajax.....	43.3	34	80	7.0	37	2 C.W.	
				Exeter.....	59.2	29	90	7.6	37	2 C.W.	

Necessary difference—7.5 bushels.

DUNCAN R. ACTON, LEMBERG

3C.....	7	11	C	Victory.....	60.0	40	97	9.0	40	Ex. 3 C.W.	S.I.
				Vanguard	75.1	40	98	8.2	38	3 C.W.	S.I.
				Ajax.....	60.0	41	97	8.8	39	3 C.W.	S.I.
				Exeter.....	76.8	39	98	8.8	39	3 C.W.	S.I.

Necessary difference—8.9 bushels.

Tests discarded on account of drought, hail, pests or other causes.

3A.....	7	4	C	Marjorie Keller, Kipling.							
3C.....	7	10	C	Edward T. Evans, Bangor.							

CONCLUSIONS

The reader is reminded that the results shown in this report are based on tests conducted for the year 1945 only, when climatic conditions over Saskatchewan could not be considered normal. This factor produced results ranging from complete crop failure in some districts to abnormally excellent yields in other areas. The resultant extreme comparisons contained in the report are only possible under climatic conditions of this nature and with the opportunity of studying the reaction of varieties under such conditions it is felt that much worthwhile information has been collected.

One of the aims of the Wheat Pool organization in sponsoring the Variety Test project is to impress upon the farm youth of the Province the necessity for studying varietal performances with a view to producing high quality grain. The results of such study will allow the future agricultural generation to farm more efficiently and concentrate on the product most needed by the consumer.

The Junior Co-operators are also given an opportunity to appreciate the widespread nature of some of the projects conducted by the Wheat Pool in an effort to assist the farmer in his problems.

The Variety Test programme furnishes a good deal of reliable information to our cerealists and plant breeders, enabling them to study Province-wide tests of new varieties and assisting them in making their recommendations. In this regard, it may be mentioned that the Saskatchewan Cereal Variety Committee, which meets annually to make recommendations, uses the results of Wheat Pool Tests together with its own findings in establishing the varieties best suited for use during the coming year. This committee has recently published varietal recommendations for 1946 and copies of the pamphlet may be obtained free of charge from the University of Saskatchewan, the Saskatchewan Department of Agriculture, or the Saskatchewan Co-operative Producers Limited, Regina.

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